The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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STANNARIES OF CORNWALL.
IN THE VICE WARDEN'S COURT.
BORLASE AND OTHERS v. THOMAS.

WHEREAS the Vice-Warden did, on the 27th day of January last, order that a sale be made of (amongst other things) the machinery and materials upon, and belonging to, Wheal Rose Mine, in the parish of Sithney, within the said stannaries, under the direction of the registrar of the court, and that the proceeds of such sale should be applied by the said registrar in the manner directed by the decree, in the above mentioned cause.—Notice is hereby given, that, pursuant to the said decree, a PUBLIC AUCTION will be holden at WHEAL ROSE MINE aforesaid, on Tuesday, 20th of April next, at Eleven o'clock in the forenoon, for selling either together, or in lots, the undermentioned MINING MACHINERY, MATERIALS, and other effects—viz., a capstan and shears, two horse whims, with shaft tackles, twenty fathoms of ladder, a quantity of debenture, whole, half, and quarter balk planks, &c., a timber shed, three pieces of Memel rod timber, three large iron blocks, a large quantity of wrought and cast-iron, smith's bellows, anvil, vice, grindstone, carpenter's bench, winze, kibbles, hilts, chests, cisterns, barrows, a quantity of brick, nails, about twenty dozen of candles, counting-house furniture, &c., &c.

For viewing the same, application may be made at the mine, and for further particulars (if by letter post-paid) to Mr. T. P. Tyacke, solicitor, Helstone; or to Messrs. Paul and Roberts, solicitors, Truro.

Dated the 31st day of March.

GLAMORGANSHIRE.—VALUABLE FREEHOLD ESTATE AND COAL MINES.

TO BE SOLD, BY AUCTION, by Mr. M. WHITTINGTON (by order of the mortgagee, under a power of sale), at the Castle Inn, Neath, on Thursday, the 22d day of April next, at Two o'clock in the afternoon, subject to such conditions as will be then produced, unless previously disposed of by private contract, of which due notice will be given, all that MESSUAGE or TENEMENT, FARM and LANDS, commonly called or known as NANSTALLON, otherwise NANSTALLWN, situate and being in the several parishes of Ystradgunlais, in the county of Brecon, and Cadoxton juxta-Neath, in the county of Glamorgan, containing, by estimation, 160 acres, or thereabouts.

The situation of this property is well adapted for the erection of ironworks, having a plentiful supply of coal and iron ore upon the estate, with the command of two fine streams of water. There are six seams of coal, containing, in the aggregate, forty feet, or thereabouts; the seams of iron ore are also very productive, and have been proved to be of a very rich quality. This estate is also of great value, considered as the key to all the minerals under the Drim Mountain, several hundred acres in extent. The property is situate six miles from the Neath Canal, at Aberdulais, and three from the Swansea Canal, at Ynisceedwin, to which place there is a ready communication by a railroad, which passes through the property, to the neighbouring quarries of limestone. There is also a valuable right of common upon the Drim Mountain attached to the estate. A small piece of the waste ground, containing sixty perches, or thereabouts, in extent, has been let for a term of which eighty-seven years are now unexpired, at the annual rental of £1, and the estate will be sold subject thereto. An abstract of the powers under which this property is sold will be produced at the time of sale.

For further particulars, and to treat for the purchase, by private contract, apply to Mr. Montague Grover, solicitor, Cardiff; or to the auctioneer, Neath.—All letters to be prepaid.

TO BE SOLD, BY PRIVATE CONTRACT, that extensive coal field, known as the HAZLERIGG COAL MINES, together with the long-established, and valuable current-going colliery, called FAWDON COLLIERY, situated about three miles north of Newcastle-upon-Tyne, with all the fixed and moveable stock thereon.

The coal, which is the High Main, or Wall's End seam, is of excellent quality for domestic purposes, and has been well known in the London and coast markets for the last twenty-six years as "Newmarch's Wall's End." A new winning was completed between one and two years ago, and a pumping-engine erected thereon, considerably more than competent to the fullest requirements of the colliery, and no outlay will be needed in the winning of new portions of coal to this colliery for a long period of years. The great extent of the Hazlerigg coal field, comprising about 4000 acres, affords the opportunity of establishing other valuable collieries.

For further particulars, application may be made to Mr. James Easton, the colliery viewer, to Mr. Thomas Forster, Haswell colliery; to John Wilkinson, Esq., solicitor, Hull; to Messrs. Bell, Brodrick, and Bell, solicitors, Bow Church-yard, London; or to Messrs. Carr and Jobling, solicitors, Newcastle-upon-Tyne.

Newcastle, November, 1840.

LEAD MINES TO LET.—WANLOCKHEAD LEAD MINES, in the parish of Sanquhar, and county of Dumfries, the property of His Grace the Duke of Buccleuch and Queensberry.—The present lease of these valuable mines has been extended for another year, to allow time for the arrangements necessary in settling with the present tenants; it will in consequence expire on the 14th day of August, 1842, instead of 1841, as formerly advertised, and the lease of the land held by the present lessees, in connection with their mining operations, will expire at the term of Whitsunday, 1842. The proprietor is now ready to treat for a new lease, to commence from and after those dates. Any company or individual of enterprise, acquainted with such matters, and possessing an ample capital, will probably find these works well worthy of their attention.

For further particulars apply to William Maxwell, Esq., Chamberlain on the Estate of Queensberry, Dalkeith, by Thornhill; Messrs. Gibson and Home, W.S., 12, Charlotte-street, Edinburgh; or Messrs. Oddie, Forster, and Lumley, solicitors, Carey-street, London.

WANTED, a second-hand CONDENSING STEAM-WHIM, or WINDING ENGINE, of from eighteen to twenty-four inches diameter in the cylinder, with fly-wheel, boiler, &c., complete, and having a cage with a vertical axle. Application, with full particulars, to be addressed to Mr. H. English, 37, New Broad-street, London; or to Mr. H. Thomas, Connocrve Mines, Rathdrum, Ireland.

BLACK-JACK.—FOR SALE, at Moorswater, near Liskeard, at the head of the Liskeard and Looe Canal, about TWO HUNDRED TONS of BLACK JACK, from Wheal Gill Mine. For price and other particulars, apply to Crouch and Dymond, Penzance.—Penzance, March 7th.

BLAENANON IRON AND COAL COMPANY.—NOTICE.—The ANNUAL GENERAL MEETING of the proprietors of this company will be held on Friday, the 23d inst., at One for Two o'clock, at the London Tavern, Bishopsgate-street, which meeting will be made special for the purpose of confirming the resolutions passed at the Extraordinary Meeting of the 6th instant, for increasing the permanent capital of the company. W. H. WEST, Sec.

Blaenavon offices, 4, Pancras-lane, April 7.

COCAES SCRIP.—The following are the numbers of 102 scrip certificates FORFEITED for non-payment of the third instalment:—Nos. 164 to 169, 682 to 684, 686, 711, 749 to 777, 859 to 867, 1013, 1021, 1022, 1042 to 1046, 1099 to 1103. By order of the board,

WILLIAM MARINER, Secretary.

National Brazilian Mining Association, 26, Throgmorton-street, April 9.

CORNWALL GREAT UNITED MINES.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be held at the George and Vulture Tavern, Cornhill, London, on Thursday, the 29th instant, at Two o'clock precisely.

Manchester, April 6.

GREAT WHEAL CHARLOTTE MINING ASSOCIATION.—The resolutions for raising additional capital, having been resolved upon at the Special General Meeting, held for that purpose, on the 18th of March, and confirmed at another Special General Meeting on the 29th of March, the directors therefore give notice, that every holder of Great Wheal Charlotte Mining shares is entitled to the pre-emption of two new shares for every five old ones, on the PAYMENT of FIVE SHILLINGS per share, on or before the 14th April, and the same sum on the 14th May, the 28th June, and on the 31st July next, subject to profits, rules, and regulations, of all other shares on which Fifty Shillings per share has been paid.

Lancaster Pountney hill, March 30.

POLBREEN TIN AND COPPER MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders will be held on Wednesday, the 5th of May, at One for Two o'clock precisely.—44, Finsbury-square, London, April 9.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonies to its usefulness with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c., &c.:—

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

WANTED, in a locomotive and other engine manufactory, in one of the principal towns in the kingdom, two respectable Youths as APPRENTICES. As the utmost care and attention will be bestowed in instructing them in every branch necessary to a full and competent knowledge of the business, a commensurate premium will be expected.—Letters addressed "Mechanicus," and left at the office of this Journal, will be attended to after the 1st May.

ANDREW SMITH'S PATENT WIRE ROPES, for standing rigging, lightning conductors, shopping of blocks, mining, railway, and general purposes; about half the size and weight of hempen ropes, and 25 per cent. cheaper. Testimonials to that effect, with specimens, may be seen, and every information obtained, at the office, 76, Old Broad-street, city; 69, Princes-street, Leicester-square; manufactory, Mill-wall, Poplar; and also of the following agents:—

Fox, Hawkins, and Hickling, New-street	Birmingham.
Robertson and Co., 12, Goree Piazzas	Liverpool.
Matthias Dunn	Newcastle-on-Tyne.
Joseph Bothway	Plymouth.
John Thompson and Co.	Wigan.
T. F. Tregellas	Truro.
Thomas Mooney and Son	Dublin.
Coates and Young	Belfast.
James Kibble and Co.	Glasgow.
James Gunn	Leith.

This rope has been in use for standing rigging in her Majesty's Navy, and in a great number of merchants' ships, for upwards of five years, and is giving the highest satisfaction; the rope is also employed in various mines and railways in different parts of the kingdom, but reference is especially made to the Blackwall Railroad, where its capabilities have been most severely tested, for although it has been in use upwards of eight months, and has travelled a distance nearly equal to the circumference of the earth, it is, to all appearance, as good as when first applied.

COMMERCIAL BANK of LONDON, No. 3, Moorgate-street, Lothbury, and No. 6, Henrietta-street, Covent-garden.
Capital £2,000,000, in 2000 shares of £1000 each.

TRUSTEES.

The Right Hon. Lord Petre	Hon. William B. Petre
Thomas Barnewall, Esq.	John Taylor, Esq.
Edward Oxenford, Esq.	George Rennie, jun., Esq.

DIRECTORS.

Chairman—Edward Stillingfleet Cayley, Esq., M.P.
Deputy-Chairman—John Taylor, Esq.

Henry Barnewall, Esq.	Geo. Alfred Muskett, Esq., M.P.
George Bulpett, Esq.	Edward Oxenford, Esq.
Thomas Collett, Esq.	George Rennie, jun., Esq.
Thomas Grimsditch, Esq., M.P.	John Shewell, Esq.
John Harvey, Esq.	Joseph Travers, Esq.
Arthur T. Holroyd, Esq.	R. Walker, Esq., M.P.
Jonathan Hopkinson, Esq.	Thomas Wyse, Esq., M.P.

Charles Weld, Esq.

Manager—Alfred R. Cuthill.

Solicitors—Messrs. Amory, Sewell, and Moores; and Messrs. Norris and Sons.

The directors having purchased the banking premises in Henrietta-street, Covent-garden, lately occupied by Messrs. Wright and Co., hereby give notice, that they COMMENCED BUSINESS on the 31st ult. A committee of three of the directors will attend daily in Henrietta-street.

Accounts of parties received and kept on the plan generally adopted by London bankers. Parties having current accounts with this bank have the advantage of transferring any surplus balance to a deposit account bearing interest; and sums of money are received on deposit from parties not keeping current accounts, at such rate of interest and for such periods as may be agreed upon.

An arrangement has been made which ensures the strictest secrecy as to all accounts kept at this bank.

The agency of country and foreign banks undertaken on such terms as may be agreed upon. Purchases and sales of British and foreign securities, &c., effected, dividends received, and every description of banking business transacted.

NORTH KENT RAILWAY.—EVERY INFORMATION relative to this undertaking may be OBTAINED by application at the office, No. 42, Lombard-street, between the hours of Ten and Four o'clock daily.

OPENING.—GREAT NORTH of ENGLAND RAILWAY.—The public are informed that the GREAT NORTH of ENGLAND RAILWAY was OPENED from YORK to DARLINGTON, for public traffic, on Wednesday, the 31st of March.

The trains will depart at the following hours:—

FROM DARLINGTON TO YORK.

½ 45 A.M.—Taking passengers for London, Derby, Birmingham, Sheffield, and Manchester.

8 A.M.—Taking passengers for London, Derby, Birmingham, Sheffield, Manchester, Leeds, Selby, and Hull.

12 30 P.M.—Taking passengers for Derby, Sheffield, Manchester, Leeds, Selby, and Hull.

3 P.M.—Mail, taking passengers for London, Derby, Leicester, Birmingham, Sheffield, Manchester, Leeds, Selby, and Hull.

6 P.M.—Taking passengers to York.

FROM YORK TO DARLINGTON.

6 A.M.—Bringing passengers from York.

7 30 A.M.—Mail, bringing passengers from London, Leicester, Derby, & Sheffield.

9 35 A.M.—Bringing passengers from Manchester, Leeds, Selby, and Hull.

2 30 P.M.—Bringing passengers from Birmingham, Nottingham, Derby, Sheffield, Manchester, Leeds, Selby, and Hull.

6 P.M.—Bringing passengers from London, Birmingham, Derby, Sheffield, Manchester, Leeds, Selby, and Hull.

Until further notice, passengers will only be booked as far as York, where the carriages are changed.

Until the 6th of April, 1841, the London mail trains will leave York at 8 15 A.M., instead of the hours stated in the time table.

On Sundays only the mail trains run.

FARES BETWEEN YORK AND DARLINGTON.

Passengers.—1st class, 12s.; 2d class, 7s.

Carriages.—On two wheels, 20s.; on four wheels, 30s.

Horses.—One, 7s.; two, 10s.; three, 16s.

Parties riding in their own carriages, and children under seven years of age, at lower rates.

Carriages and horses must be at the station a quarter of an hour before the departure of the trains; and, to prevent disappointment, previous notice should be given to the station.

The company will not be responsible for luggage, unless it is booked and paid for according to its value; and passengers are particularly requested to have their name and address fully marked thereon, and to satisfy themselves that it is deposited on the carriages.

NEWCASTLE-UPON-TYNE AND CARLISLE RAILWAY.
TIMES OF DEPARTURE AND ARRIVAL OF THE TRAINS.

Leave Newcastle and Redheugh.		Arrive at Carlisle.
Mixed Mail	Half past 5 morning	Quarter past 2
Quick	9 o'clock	12 o'clock
Mixed	12 o'clock	Half past 3
Quick Mail	Half past 3 afternoon	Half past 10
Mixed	5 o'clock	Half past 8
Mixed	Half past 6 for Haydon Bridge.	
SUNDAYS.		
	9 o'clock morning	Quarter past 12
	5 o'clock afternoon	Quarter past 8
Leave Carlisle.		Arrive at Newcastle & Redheugh.
Mixed Mail	Half past 5 morning	Quarter past 2
Quick Mail	10 o'clock	1 o'clock
Mixed	12 o'clock	Half past 5
Mixed	Half past 3 afternoon	Half past 8
Quick	5 o'clock	8 o'clock
SUNDAYS.		
	9 o'clock morning	Quarter past 12
	5 o'clock afternoon	Quarter past 8

FARES.

Outer Trains—Close carriages, 11s.; open ditto, 9s. 6d.
Mixed Trains—Close carriages, 10s.; open ditto, 7s. 6d.

The doors will be closed five minutes before the time of starting.

Seven coaches run daily between Carlisle and Lancaster (passing through Penrith, which is the direct route for the lakes), for Liverpool, Manchester, Birmingham, and London. Steam-boats ply regularly between Carlisle and Liverpool, also between Carlisle and Belfast. Coaches daily for Maryport, Whitehaven, &c.

Passengers leaving Newcastle by the Twelve o'clock trains will reach Carlisle in time for the Port Patrick mail for Ireland, by way of Dumfries, &c., and also for the mails to Glasgow and Edinburgh, where they arrive at a Quarter past One next morning; and passengers leaving Edinburgh or Glasgow by the mail at night for Carlisle will arrive there in time for the Ten o'clock train, and reach Newcastle at One o'clock, P.M.—Gloss saving, in either case, nearly a day, as compared with travelling by the ordinary route.

Places may be secured by the morning and evening mails, and by the North Briton coach for Lancaster, on application at the Railway Station, Newcastle.

By order, JAMES ADAMSON, Clerk to the Company.

Newcastle-upon-Tyne, March 24.

GEOLOGY OF PARIS.

At the last quarterly meeting of the Manchester Geological Society, Mr. James Heywood read the following very interesting geological description of the Paris basin, written, at his request, by the Rev. H. L. Jones, M.A., late Fellow of Magdalen College, Cambridge, and now resident in Paris. The paper was illustrated by an outline map of the basin, and by geological sections, with a number of specimens containing fossils brought thence, and contrasted with others from the London basin. Some of these were very perfect, especially the volutes from both basins. There were also on the table, as having some connection with the subject of basins, two sectional models (coloured), one of the Isle of Wight, and the other a geological sectional model of Alum Bay and Headen-hill, Isle of Wight. There was also the *Carte Geognostique des Environs des Paris*, par MM. Cuvier et Brongniart. We give the introduction of the paper:—

Independently of the steep banks, quarries, and of other means which present themselves of examining the various formations of the Paris basin, from the rocks themselves, the geological student will find, in the capital, ample means for pursuing his researches, not only in the galleries of the Garden of Plants, but also in those of the school of Mines, in the mineralogical and geological division of the Garden of Plants, the beds of the Paris basin are well illustrated, both in the minerals and also in the fossils which they contain; and, in the School of Mines, the departments of the Seine, the Seine and Oise, and the Seine and Marne, have each their separate sets of geological cases allotted to them, in which all their contents are exemplified by very large specimens. The school of Mines also contains the beautiful and extensive collection of Messrs. Cuvier and Brongniart, which was formed by them when they compiled their elaborate work on the geology of this district. The great liberality shown to all students, and to foreign students in particular, and the very complete manner in which the Paris basin has been illustrated, render it one of the most instructive districts that can be examined by the practical and theoretical geologist. To this we may add, that the great work of Cuvier and Brongniart on the Paris basin contains nearly all the facts that are necessary to be known concerning it, and that very complete and authentic collections of specimens of all the strata of the Paris basin, and of the principal fossils, may be purchased at moderate prices from M. Gudrin, chemist and mineralogist, No. 17, Quai St. Michel, in Paris.

The entire extent of the formations comprising what may be called the Paris basin, or rather the entire series of strata which are so strikingly developed in its central portions, would be determined by a line from N.E. to S.W., commencing at Laon, and ending at Blois; and by another from S.S.E. to N.N.W., commencing at Cosne, on the Loire, and ending at Gisors, in Normandy. The rivers that carry off the waters of this district are the Seine, cutting it from S.E. to N.W. at right angles to its principal geographical axis, into which the Loing and the Essonne, inconsiderable streams, run on the south, and the Marne and Oise, much larger rivers, on the north. The chalk formation surrounds the northern portions of the Paris basin, lapping round it like a cap; while the southern parts are enclosed within the green sand and Wealden sand formations. It would seem as if a sort of gulf had been formed in the chalk and the green sand series within which the depositions of the Paris beds had subsequently taken place; and in this circumstance a remarkable analogy is presented with the related formation of the London basin, the Isle of Wight basin, and others of similar geological antiquity in various parts of Europe. The term "basin," however, when applied to all the Paris formations, in their full extent, is used in a very large sense. By far the greater part of the district above-mentioned consists of a rather elevated table land, flat on its surface, cut into valleys only where scanty streams occur; and, geographically speaking, constituting a rather arid tract. The greatest elevation is about 500 feet above the level of the sea. It is only near Paris that a depression of any considerable extent occurs. * * * In the immediate vicinity of the capital all the formations are developed in a manner the most instructive and the most commodious for the geological inquirer. There numerous isolated hills expose the series nearly from the highest to the lowest beds; and, from the great extent to which some of the strata have been cut into for economical purposes, the whole of the formations have been explored in the fullest detail and most satisfactory manner. The well-known hill of Montmartre, immediately north of Paris, presents a nearly complete section of three out of the five principal series into which the formations have been divided, and, from the precipitous cuttings made by the quarrymen, enables the student to examine each stratum, as if in a geological museum. On the heights between Versailles and St. Cloud occur the upper freshwater beds, the highest division of the series; and within a mile and a half from them, below Meudon, on the banks of the Seine, the chalk, which lies under the whole basin, crops out, and is extensively quarried. Along the whole course of the river are most extensive formations of diluvial and alluvial origin; and the table land, which occupies the principal portion of the district, throws out long promontories or arms into the main valleys, which are at once strongly characterising and highly picturesque features of the country. The elevated land which, on the southern side, separates the basin of the Seine from that of the Loire, or rather which forms part of both, is called the Beauce. As far as the Paris beds are concerned, this land has two principal water-sheds, one towards the N.W. looking to the river Eure; the other towards the E. and N.E. looking to the Seine. This land is principally covered by the sandy beds of the upper marine series; its edges are exceedingly indented, and many outlying portions stretch along its N.E. side; these form the hills at Fontainebleau to the S. and S.W. of Paris, and so on as far as Mantes. The southern highland of the basin is a vast plateau, or series of plateaux, formed of the great limestones of the lower marine series, locally termed the *calcaire grossier*. Between the two, however, another formation of the general series is extensively developed; the second freshwater beds, including the siliceous limestone and the gypseous strata with their associated beds, and extending from the neighbourhood of Fontainebleau to that of Beaumont on the Oise. The lowest beds of the series are those of the chalk, which not only appear on the outskirts of the basin, but also come into daylight at various points along the river-courses of the centre, and which, as has been proved by various borings, underlie the whole. Above the chalk occurs a freshwater formation, principally known by the name of the plastic clay formation, with some few associated beds. Next comes, in order of superposition, the great limestone (*calcaire grossier*) formation, of marine origin, with associated beds of marine fossiliferous sandstone. These, in the S.E. part of the basin are either exceedingly thin, or else disappear altogether, and are replaced by the second freshwater formation, including the siliceous limestone and also the gypseous series. It is only rarely that the siliceous limestone is found overlying the *calcaire grossier*, in general it replaces it; but, since it does overlie it in some instances, the order of superposition is thereby determined. Associated with, and also above the gypseous strata, come the freshwater marls. Next occurs the uppermost marine series, which is principally composed of immense beds of sand that lie on the Beauce country, with very remarkable beds of oysters below them in certain localities (though they themselves contain no fossils *in situ*), and with subsiliferous sandstones above them. The last geological series is an ascending order, is the upper freshwater, being the third in the basin, and including the siliceous millstones, so well known in Europe. Above all occur various diluvial and vegetable beds.

Messrs. Cuvier and Brongniart make the following remarks respecting the formation of the Paris basin:—"On considering all the strata from the chalk upwards, we figure to ourselves first a sea, which deposits on its bottom an immense mass of chalk and molluscous animals of particular kinds. This precipitation of chalk, and the shells which accompany it, stop abruptly; the sea retires—waters of another nature, and very probably analogous to our freshwater, succeed it; and all the varieties of the marine soil are filled with clays, remnants of land plants, and remains of shells living in freshwater. Soon, however, another sea, producing new kinds of inhabitants, and feeding a prodigious quantity of shell fish, all different from those of the chalk, returns to cover the clay, its lignites and its shells, and upon such a bottom as this deposits immense banks, composed in great part of the testaceous coverings of these new molluscs. By degrees the production of shells diminishes, and at length ceases altogether; the sea retires, and the ground is covered with freshwater lakes; alternate strata of marl and gypsum are formed, which envelope the remains of the animals nourished in those lakes, and the bones of those that lived on their banks. The sea comes back again; it supports at first some species of bivalve and turbinated shells—these shells disappear, and are replaced by oysters. A long interval of time then elapses, during which a great mass of sand is deposited. It must be supposed, either that no organised body lived at that period in this sea, or that their remains have been completely destroyed, because no remnant of them is to be found in this sand. The various productions, however, of this third sea appear at length; and we found on the summit of Montmartre, Romainville, and Montreuil le Haudouin, the same shells as were found in the marls above the

gypsum, and which, though in reality different from those of the *calcaire grossier*, have, nevertheless, a strong similitude to them. At length the sea retreats entirely for the third time—lakes or pools of freshwater come in its stead, and cover, with the remains of their inhabitants, almost all the summits of the eminences, and the surfaces even of some of the plains that separate them."

The paper then proceeds at great length to give in detail a great mass of interesting facts relative to the five principal formations already noticed—the chalk, the first freshwater formation, the great limestone (*calcaire grossier*), or lower marine formation; the siliceous limestone (*calcaire siliceux*); the gypseous formation, including the gypseous maris, freshwater and marine; the upper marine sands and sandstones; and upper freshwater (or highest) formation in the Paris basin—concluding with notices of the diluvial and alluvial formations; and to the paper was appended a list of the fossils of all the formations containing any. We cannot attempt even an abstract of these, by far the greatest portions of the paper, but must content ourselves with giving a few interesting facts mentioned in the course of these notices. Referring to the chalk formation, it is stated that—

"A very satisfactory measurement of its thickness has been obtained at Paris in the plain of Grenelle, where a boring has for some time been going on in the yard of the great slaughter-house for an Artesian well.—(Since completed). The total depth attained by the boring instrument is 508 metres, or about 1670 English feet. * * * At Montrouge, south of Paris, as also at Arcueil and Gentilly, the plastic clay, which is red, is extracted from beneath the *calcaire grossier*, by means of wells, sunk through the floors of the immense quarries that exist there, and is largely used for pottery. * * This series (the *calcaire grossier*) forms the large beds south of Paris, out of which all the building stone of the capital is quarried; and there are few formations in the world which have been so well examined, and the nature of which is so well known. * * * One of the most striking characteristics of this part of the series (the lower strata of the *calcaire grossier*) is the extraordinary number of fossil shells which it contains, most of them so well preserved, that even their nacreous (pearly) inner remains, and those shells that are provided with *spicula* still retain them. [Specimens of shells exhibiting these remarkable proofs of excellent preservation, were upon the table]. * * * Near the upper part of this series occurs the bed locally called the 'rock' (*la roche*), which, from its superior quality, constitutes the best building stone round the capital. * * * At Carrières St. Denis (so called because the monks of St. Denis made quarries there, for stone to build their abbey), the upper surface of the highest strata presents long and deeply-marked strim, evidently formed by violent erosive action, probably of some strong current; and throughout all the district vertical circular fissures or natural wells occur in the strata, filled with ferruginous clay, and broken or rolled flints. One of the most remarkable spots included in this part of the series, and one of the best known to tourists, is the beautiful valley, or rather elevated plain, of Montmorency, lying between the gypseous hills to the north, over which the forest of Montmorency extends, and the narrow ridge of the hills of Franconville, to the S.W. * * * To the south of Paris the *calcaire grossier*, in nearly its whole thickness, is well developed, though upon only a narrow slip of geographical extent, and stretches from Choisy le Roi to Meudon. The southern part of the capital is built on part of this formation, and the extensive quarries cut into it for building stone for the city has formed the celebrated catacombs. * * * At Villepreux and Grignon, west of Versailles, the beds of the lower part of the series are remarkable for the extraordinary abundance of fossil shells they contain—all in the most perfect preservation. One bed in particular, a sandy one, from fifteen to twenty feet thick, is an entire mass of fossils, thrown together pell-mell, and most of them filled with sand, the same as that of which the bed itself is composed. M. Defrance has enumerated 500 different species of shells from Grignon alone; they may all be found described in the works of Lamarck and Deshayes, on the fossil conchology of the Paris basin. * * * The equivalent of the *calcaire grossier* in the London basin is what is commonly called the London clay. * * * This rock (the siliceous limestone), when burned for lime, produces it of very excellent quality; and the stone quarried from the thicker and harder beds is used for the higher and decorative purposes of building. It admits of a good polish, and then constitutes a beautiful dove-coloured marble. The columns of the church of Notre Dame de Lorette, and of the church of the Madeline at Paris, as well as a great part of the triumphal arch at the Barrière de l'Etoile, are of this material. The rock is so penetrated with siliceous matter, that, if a small portion of it be put into nitric acid, the calcareous portions are eaten away, and a siliceous, reticulated, or spongiform mass left, having the appearance of common Parisian millstone. * * * Two remarkable beds of oysters are found among them (the marine maris of the gypseous formation); and, what is very extraordinary, are constantly met with over a very wide extent of country. The lower bed contains oysters of a large size, all adhering to each other, just as they were when alive; the upper bed contains oysters of a smaller size, and equally well preserved. These two beds are valuable geological instances of fossils said to be *in situ*. * * * This formation (the upper marine sands and sandstones) is composed partly of an immensely thick bed of ferruginous and slightly micaceous sand, and partly of thick beds of sandstone, which are most extensively quarried for paving stones, and used not only for the capital, but for the greater part of the roads in this division of France. * * * The characteristic bed of this series (the upper freshwater formation), and what gives it its peculiar features, is the siliceous millstone formation for which it is so celebrated, and which, from its nature and great extent, is nearly unique in the world. * * * It is quarried at numerous points, but especially at La Ferté-sous-Jouarre, and is exported to all parts of Europe as well as to North America. The siliceous millstone is a mass of intensely pure silex, sometimes blackish, sometimes milky white, sometimes reddish, full of cavities, which again have siliceous lines and reticulated divisions within them, like the tissue of bones. All these cavities are either lined or filled with ferruginous or calcareous marl. In general, the more numerous and the smaller the cavities, the better is the quality of the millstone for economical purposes. The precautions used in cutting this formation into circular stones or slabs is very great; and the value of such stone is very considerable—a single millstone, of the first quality, white coloured, not broken into fragments, fetches 1200 francs, or nearly 50*l*., and a pair of common stones are usually sold at from 12*l*. to 20*l*. The square or broken pieces of the rock are bound together by iron bands into circular millstones, and these alone are the kind exported; the unbroken millstones never leave the country. The quarries at La Ferté-sous-Jouarre are known to have been worked for this stone upwards of 400 years. * * On the S.E. side of the plain of St. Denis, in the cuttings made for the Canal de l'Ourcq, a small piece of rising ground was cut through to a considerable depth, and laid open several strata of argillaceous marls, under which was a thick bed of vegetable earth, at the bottom of which lay the immense deposit of the remains of ancient, and, in many cases, extinct mammifera, which formed the groundwork for Cuvier's elaborate researches on fossil osteology. * * * The alluvial districts are to be found all along the course of the rivers; but they have not been so much studied as their importance merits. In the valley of Essonne are peat beds; and at Chatou, near St. Germain, large trunks of trees have been found, deep in the soil or islands, now in the middle of the river. In the island which once existed in the Seine, where now the tobacco manufactory of Gros Caillou, in Paris, stands, there was found, in 1809, an ancient canoe. In general it may be said, that the alluvial and diluvial deposits of the Seine, the Marne, and the Oise, have not been sufficiently studied; and as MM. Cuvier and Brongniart observe, there is enough in these formations to occupy a careful geologist for years."

Fossil Rain.—Singular as may appear the notion that the impressions of rain should be recognisable and be recognised on the surfaces of stratified rocks, the opinion is held by some eminent geologists, on the evidence of specimens of new red sandstone taken from the Storeton Quarries, near Liverpool. In March, 1839, Mr. Cunningham, to whose researches in the Storeton Quarries we are indebted for much of our knowledge of the foot-prints of Chirotheria and other ancient animals, communicated a paper on the subject to the Geological Society of London. "In examining some of the slabs of stone extracted at the depth of above thirty feet, Mr. Cunningham observed, that their under surface was thickly covered with minute hemispherical projections, or casts in relief of circular pits in the immediately adjacent layers of clay. The origin of these marks, he is of opinion, must be ascribed to showers of rain, which fell upon an argillaceous beach exposed by the retiring tide, and their preservation to the filling up of the indentations by sand. On the same slabs are impressions of the feet of small reptiles, which appear to have passed over the clay previously to the shower, since the footmarks are also indented with circular pits, but to a less degree; and the difference Mr. Cunningham explains by the pressure of the animal having rendered these portions less easily acted upon." If these impressions on the clay be really the marks of rain or hail (a specimen is before us, and it certainly resembles such impressions on clay), perhaps the easiest way of comprehending the preservation of them is to suppose dry sand drifted by the wind to have swept over and filled up the foot-prints, rain-pits, and hollows of every kind which the soft argillaceous surface had received.

Volcano in Batavia.—It is stated in letters from Batavia of the 25th of last November, that the volcano Gedé had been very active. Although five flames had appeared, the volumes of smoke issuing from the crater were very dense; and a slight fall of cinders had been experienced. The phenomena were most perceptible at Petjet, ten miles from Tanjor, from which place it is said flames were observed. The most remarkable of these volcanic phenomena occurred on the 12th of last November.

LAW INTELLIGENCE.

INDEPENDENT WEST MIDDLESEX INSURANCE COMPANY.

HOME CIRCUIT—KINGSTON, APRIL 6.

The disgraceful fraud perpetrated by the individuals composing the above "company," was this day brought before the notice of the court by an action brought by parties who had advanced money to the concern, against an individual named Williams, represented to be an attorney. The action was brought to recover large sums of money, such as 300*l*., 400*l*., and 700*l*.

Mr. Platt and Mr. Gurney appeared for the plaintiff; and Mr. Thesiger and Mr. Creasy conducted the case for the defendant.

Mr. Platt addressed the jury, and said the present action was brought with a view to recover large sums of money, of which the plaintiffs had been defrauded by means of the specious artifices and contrivances of the company with which the defendant was connected. By dint of flaming prospectuses and promises of great advantages, these unfortunate persons had been induced to part with their little all, and, in many instances, had been reduced to the most hopeless ruin. The learned counsel went on to state, that this company had come before the public offering great advantages for the investment of money, and nothing was neglected that was likely to mislead and defraud the public. The scheme was advertised in every direction, and unhappily it had its effect, for a great number of persons, deceived by the specious pretensions that were put forth, were induced to invest all they possessed in the world with this bubble company, and the consequence had been, as he before stated, their utter ruin. It would be proved that the defendant took a share in this scheme, and he should be able to prove that the whole was a fraud upon the public—that persons were hired at so much per day to sign policies, &c., as directors, and, under these circumstances, the defendant, as he was prepared to contend, was liable to the plaintiffs for the loss they had incurred.

Mr. Thesiger said he could not struggle with the case, and consented to a verdict for the plaintiff.

Mr. Platt applied for immediate execution.—Lord Denman—Most certainly.

SHEFFIELD AND MANCHESTER RAILWAY—NON-PAYMENT OF CALLS.

LIVERPOOL SPRING ASSIZES—APRIL 7.

The Company v. Armstrong.—This action was brought by the Sheffield, Ashton under Lyne, and Manchester Railway Company, to recover from Mr. Robert Armstrong the amount of various calls made on the twenty shares he held in the company, amounting to 750*l*. principal, and 36*l*. interest.—Total 786*l*. The defendant pleaded that he was never indebted.

Mr. Creswell, for the plaintiff, said, this was one of the very numerous actions which the company had been compelled to bring, for the purpose of enforcing payment of their calls. The transfer to him was on the 4th of December, 1837, and the register was dated 27th June, 1838, and these calls were made since that time. The 110th section of the company's Act provided, that the company should enter in a book the names of the proprietors of the shares, which book should be sealed with the company's seal, and should afterwards be evidence of the parties being shareholders. The directors had power to make such calls at such periods as they thought fit, provided no call exceeded 10*l*. per share, and that there was an interval of three months between any call. It was necessary, under the Act, to show that the calls had been duly advertised in a newspaper circulating through the counties in which the railway was situated. The defendant had paid the first call of 2*l*. 10*s*. per share, and this claim was for the amount of the subsequent calls, including one on the 8th.

The register was produced, and the name of "Robt. Armstrong, 29th of August, 1838—20 shares," was found in it.

Mr. Stevenson (one of the clerks of the company) read the advertisements for the several calls from different numbers of the *Manchester Guardian*, which were proved to circulate in the four counties of Lancaster, York, Derby, and Chester.—Mr. Crompton, for the defendant, submitted that this was not enough; that the company was bound to publish the call in one or more newspapers published and circulated in each of the four counties.

The jury found for the plaintiffs—damages 786*l*., costs 40*s*.

The Company v. Verney.—This was a precisely similar case, except that the defendant, Mr. George Verney, a shopkeeper and tradesman at Greenwich, had not paid the first or any subsequent call upon his twenty shares.—The formal proofs having been given, Mr. Jay proved that he served the defendant with a writ, and that the defendant said he was the person named therein—that he had written to Mr. Parker (the company's law clerk), in Sheffield, and had made an offer to pay all he could; but if called upon to pay the whole it would ruin him. The jury found for the plaintiffs—damages 841*l*. 14*s*., principal and interest.

Mr. Baron Rolfe remarked, that if parties took shares they must sometimes expect to pay for them.

VARTEG IRON COMPANY—NON-FULFILMENT OF CONTRACT.

Higgins and others v. Senior.—In this case, which was tried by a special jury of merchants, Messrs. V. Higgins and W. H. Higgins, trading in this town under the firm of Vincent Higgins and Son, iron merchants, were the plaintiffs, and Mr. John Senior, trading in this town, under the firm of John Senior and Co., iron merchant, was the defendant. The declaration set forth that the defendant agreed to sell the plaintiffs 1000 tons of Varteg or other merchantable bar-iron, at 6*l*. per ton, free on board at Newport, 200 tons to be delivered by the 30th August, 1840—400 tons in all September, and the remaining 400 tons by the 14th October—Maesteg iron being excluded from the contract; that both parties agreed to perform this contract, and that the defendant was required to send the iron, but refused to do so. The defendant pleaded that he had made no such arrangement, and also that the plaintiffs had made no such arrangement with him.

Mr. Dundas stated the plaintiff's case. They had employed a Mr. Mead, formerly an iron merchant, as their agent, to buy this iron. About the 20th July last, he made a contract with the defendant's brother, William Senior, who was in the defendant's place of business, for 1000 tons of Varteg iron, but the contract was cancelled, and a new one was made, which the learned counsel read, to the effect that on the date set forth (21st July, 1840), they had sold, through Mr. Mead, to Messrs. V. Higgins and Sons, 1000 tons of Varteg or other merchantable bar-iron, common sizes, flat, square, and round, at 6*l*. per ton, free on board at Newport, less 5 per cent. for cash payment, with the stipulations as to delivery before mentioned, and certain others as to freight, &c., and some exceptions as to shipment. Though the plaintiffs had about the several times specified in the contract, made repeated demands for the parcels of iron, as per agreement, accompanying the demand with intimations that they should hold the defendant responsible for the breach of contract, they had not received up to this time any of the iron, which had risen in the market at the period, and they had consequently brought the present action.

For the defendant it was contended, and evidence was given to show, that only one-half the agreement had been produced, and the other half was put in to show that the contract with the defendant as principal, but as agent for the Varteg Iron Co. The counterpart of the agreement given by Mead to William Senior was put in and read. It was dated on the same day as the other, and commenced in the following terms:—"Liverpool, 21st July, 1840. (Signed) Samuel Mead for V. Higgins and Co., iron merchants. Bought of the Varteg Iron Co., per John Senior and Co., 1000 tons of good merchantable bar-iron, &c." The remainder of the paper was in precisely the same terms as that given in evidence for the plaintiffs, except a postcript excluding Maesteg iron.—The jury retired, and after a short absence, delivered in a verdict for the plaintiffs—damages, 145*l*., or 1*l*. 9*s*. 10*d*. per ton on 1000 tons; costs, 40*s*. His lordship certified that it was a fit case for trial by a special jury.

Joint-Stock Companies.—The following gentlemen have been appointed as the Select Committee, to inquire into the state of the laws respecting joint-stock companies (banking companies excepted) with a view to the prevention of fraud:—Mr. Labouchere, Mr. Shiel, Lord Granville Somerset, Mr. G. W. W. Wood, Sir Thomas Fremantle, Mr. Oswald, Mr. Wolverley Attwood, Mr. Clay, Mr. Godson, Mr. Hawkins, Mr. Blake, Mr. Gibson Craig, Mr. Freshfield, Mr. Baring (Thetford), and Mr. Bowring.

Extraordinary Performance of an American Locomotive.—*From a Correspondent.*—On the 9th ult. the *Hickens and Harrison* engine hauled over the Philadelphia and Reading Railroad (51½ miles in length from Reading to its intersection with the Columbia Railroad) a net burden of 309½ tons of 2240 lbs., in 105 cars, weighing 173 tons—making a total gross weight of 482½ tons; weight of engine, with water and fuel, 26,700 lbs.; cars, four wheeled; and running time 4 hours 34 min.; the whole length of train 1260 feet. The engine started the above train, on a level, without any assistance, and gradually increased her speed to the average of 11¼ miles per hour. The above performance is believed to be unsurpassed, and the train to be the longest and heaviest ever hauled by one engine on any railroad in Great Britain or America.

Paris and Rouen Railway.—The *Havre Journal*, in noticing the arrival of waggons and workmen for the Paris and Rouen Railroad in that port, says that the waggons have been hired from the London and Southampton Company at a much lower price than they could possibly have been in France, and that the workmen who have been sent over are all chosen from the most sober and laborious of their class that could be found in England. This Journal takes the opportunity of pointing out the activity and energy shown by the English engineers, and the Paris and Rouen Company, and holds up their example to the notice of all engaged in France on similar works.

FOREIGN PATENTS.

[From a list of patents lately granted by the Belgian Government.]

Ad. Le Hardy de Beaulieu, a patent of invention for fifteen years, for a machine for extracting ores and raising water from mines by means of endless vertical ropes.

Pierre Joseph Durieux, a patent of invention for five years, for a subterraneous goniometer, to be used instead of the compass in mines in which there are magnetic substances, or on railroads.

F. Boo, a patent of invention for fifteen years, for an apparatus applicable to the condensers of steam-engines working in a vacuum, and condensing by external cooling.

Benjamin Winkles, represented by Dethy, patent of invention for ten years, for improvements in the construction and arrangement of flood-gates and water-wheels.

Matthieu Louis Muëseler, a patent of improvement for fifteen years, to date from the 15th Sept., 1840, for improvements in the colliers' lamp (for which he had previously obtained a patent).

E. G. Brabant Lemielle, a patent of invention and improvement for ten years, for a process of soldering metals by their fusion alone, without the aid of other substances.

James Hancock, represented by Delianson Clark, a patent of invention and improvement for fifteen years, for an improved method of raising water and other fluids.

Henri Steven, a patent of invention for fifteen years, for a machine for raising water to any required height by atmospheric pressure.

J. S. Guillemin, a patent of invention for ten years, for a new mode of draining, effected by pumps, called by the inventor "semi-auto motrices."

G. Hoorickx, a patent of importation for five years, for the manufacture of a new fuel called "carboleine."

Henri Steven, a patent of improvement for fifteen years, to date from the 3d Feb. 1841, for an improvement in the machine for raising water (for which he obtained a patent the 3d Feb., 1841), and which improvement consists in substituting condensed steam in place of the pneumatic pump.

[From the *Journal of the Franklin Institute*.]

Specification of a patent for an improvement in the process of protecting articles of iron and steel from oxidation, granted to Palmer Sumner and Peter Naylor.

To all whom it may concern, be it known that we, Palmer Sumner and Peter Naylor, of the city of New York, have invented an improvement in the "process, method, or methods, by which various articles of iron, or steel, may be preserved from oxidation, or rusting, by the galvanic action produced by zinc," for which process letters patent of the United States were granted to M. Sorel, on the seventh day of December, 1837; and we do hereby declare that the following is a full and exact description of our improvement.

We, the said Palmer Summer and Peter Naylor, having become proprietors, by assignment, of a right to use the said process, have, in carrying the same into practical operation, found that the malleability of sheet-iron is much impaired by giving thereto a coating of zinc, in the manner directed in the specification of the letters patent of the said M. Sorel; and that, in consequence of this diminished malleability, such prepared sheet-iron is unsuited, in many cases, to be applied to the purpose of covering the roofs of houses, or to be otherwise used where it is required to be grooved, seamed, or in any way suddenly bent; and our improvement consists in a process by which this difficulty is obviated, whilst the zinc is at the same time so applied as by its galvanic action on the iron, to protect it from oxidation.

We take sheets of iron, and cover them with tin, or with an alloy of tin and lead, adopting in this process the mode, or modes, followed in the well-known manufacture of sheets, or plates, of iron into tin plate. After having completed this operation, we submit the sheets, or plates, so prepared to a like process, with the substitution of zinc for tin, or an alloy of tin; the mode of performing which process is fully set forth in the letters patent granted to said M. Sorel, and does not differ from the ordinary process known under the name of tinning. When thus treated, the plates, or sheets, of iron preserve their malleability unimpaired, and may be bent and otherwise worked as easily as before they had received such coating—a result which appears to be due to the interposition of the coating of tin between the zinc and the iron, by which interposition the chemical combination of the iron and zinc is prevented. Where it is not necessary to use plates of metal of a larger size than that of sheets of tin plate, we take that material as it comes from the manufactories, and have then only to give to it a coating of zinc, to receive which it does not require any particular preparation.

In the letters patent granted to M. Sorel, it is proposed, sometimes, to add a coating of tin over that of the zinc, for the purpose of giving to the article made, a brighter appearance, and as an improvement also in culinary vessels; but our process is the reverse of this, and the end attained by us altogether different from that above proposed, and, at the same time, our process produces a new and useful result.

What we claim, therefore, as our invention, and as an improvement on the process of M. Sorel, is the preserving the malleability of sheet-iron, whilst it is protected from oxidation by the galvanic action between it and the zinc, in the manner above set forth—namely, by first tinning said iron in the ordinary way, and afterwards by giving thereto a coating of zinc above the tin.

THE MANUFACTURING ESTABLISHMENTS AT COUILLET.

The following account of the manufactories carried on at Couillet, near Charleroi, taken from *Le Fanal*, gives a most flourishing description of the iron manufactures in Belgium:—Couillet is only half an hour's journey from Charleroi, and by Charleroi is generally understood all the surrounding localities which give importance to a town, which in itself is very disagreeable, and has nothing to recommend it. A simple description of this great depôt of industry will give some idea of its extent and importance. Many of our readers have heard the name of that establishment again and again, but they cannot form an idea of its amazing extent. It was surpassed only by one rival in Belgium; but Seraing was too large, it was like Mount Athos, overwhelmed by its own weight. Couillet possesses eight blast furnaces. There immense cauldrons, in which the coke and the ore produce every morning and evening lakes of boiling metal, which is run every twelve hours. There are also two furnaces of fine metal; a large manufactory for making fire proof bricks; a rolling apparatus, where the thickest bars of iron are rendered as pliable as the smallest needles. There is also a large foundry, a manufactory for steam-engines and machinery; two large forges; a workshop for the construction of boilers, those prime movers of modern industry, where the roaring steam is at once confined and rendered formidable. Couillet is able to produce in one day 80,000 kilogrammes of cast-iron, 20,000 kilogrammes of fine metal, and 50,000 kilogrammes of bar-iron of all sizes. It can produce in a year steam-engines equal in aggregate power to the force of 1200 horses, working without ceasing. It consumes daily in the manufacture of cast-iron 240,000 kilogrammes of ore, 320,000 kilogrammes of fuel, 80,000 kilogrammes of calcareous earths; an enormous total of 640,000 kilogrammes of materials. Couillet may be judged of by a single comparison. The whole of Belgium produced in 1839 45,000,000 of cast-iron; Couillet alone supplied 30,000,000—that is, two-thirds. And at the present time, when our increased production of cast-iron amounts to 90,000,000, Couillet still contributes a third part of it. We, notwithstanding, do not include in this calculation 8,000,000 kilogrammes of metal which come from the refining furnaces. It consumes in the manufacture of iron 15,000 kilogrammes of fine metal, 50,000 kilogrammes of cast-iron, and 110,000 kilogrammes of fuel per day.

The coal mines of Marcinelle belong to Couillet; all the coal that is extracted from them, as well as a part of that from its other mines at Chatelet, are consumed by its blast-furnaces. The moving power employed in the ramifications of this colossal establishment is upwards of 1035 horses constantly at work, this power being given by twenty-seven steam-engines. Besides this, it employs from 16,000 to 17,000 workmen in the manufactories and collieries. This magnificent establishment of Couillet has been entirely formed in less than ten years under the direction of M. Henrard.

Extraordinary Fossil.—We yesterday had sent, for our inspection, a very remarkable remain of a former world, the far-tooth of a mammoth, or mastodon, in very excellent preservation, which was found, about three weeks ago, among some gravel in the bed of the Trent, a few miles from Nottingham. The tooth weighs 9¼ lbs., and is, perhaps, the most perfect specimen which has ever been seen in England. What is most extraordinary, is the fact of its being met with in a neighbourhood where no geological remains of any note have yet been discovered. Though found among gravel, it shows no evidence whatever of having been subjected to any attrition. The fang is almost perfect, though the outer coating, or tartar, with which the tooth was apparently covered, is at one end removed, and discloses the enamel, as though that end had been above the gravel in the water, and subjected to the washing of ages. We should recommend a diligent search, both among the gravel and in the neighbouring bank, from which the tooth might probably be washed, in order to see if any other remnant of this antediluvian monster (which, judging by the size of the tooth, must have been some twenty feet high) can be discovered.—*Birmingham Advertiser*, Thursday.

Mammoth.—A magnificent skeleton of a mammoth has been discovered near St. Louis, thirty-two feet long, and sixteen feet high. The animal, when alive, is estimated to have weighed 60*t*y tons. The jaws and teeth show that he was both carnivorous and graminivorous.

Bristol and Exeter Railway.—The line from Bristol to Bridgewater, we understand, will be ready to open for traffic on Whit Monday the 31st of May.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBUSH MINING COMPANY.

April 5.—I beg leave to inform you, that the lode in the 110 fathom level west is about eight inches wide, and producing rich stones of copper ore. The 100 fathom level west is still in a good course of ore, the lode being eighteen inches wide, and worth 35*l.* per fathom. In the new stopes, in back of this level, no lode has as yet been taken down. In the ninety fathom level west the lode is sixteen inches wide, and worth 13*l.* per fathom. In the rise, in the back of the eighty fathom level, the ground is still moderate. In the level east of the engine-shaft the lode is twenty inches wide, composed chiefly of mundic and spar. The lode in the eastern stopes, in back of the eighty fathom level, is sixteen inches wide, and worth 20*l.* per fathom. The lode in the western stopes, in back of ditto, is twenty inches wide, and worth about 32*l.* per fathom. In the seventy fathom level, eastern stopes, the lode is twenty inches wide, and worth 30*l.* per fathom. The lode in the western stopes, in back of ditto, is eighteen inches wide, worth about 25*l.* per fathom. The cross cut to Hitchins's shaft, at the sixty fathom level, and rise in the back of ditto, against Bray's shaft, are without important alteration. The tribute pitches, upon the whole, are still looking favourable. We weighed on Tuesday, the 30th ult., February ores, 206 tons 6 cwt., and sampled March ores, computed 208 tons, of good quality. F. PHILLIPS.

REDMOOR CONSOLIDATED MINING COMPANY.

April 5.—The sumpmen are still engaged in fixing the lift, altering pit-work, &c., &c., to the fifty fathom level. We suppose they will resume sinking in course of a day or two. In driving cross-cut south, at the fifty fathom level, the ground is favourable. At the forty fathom level, driving east, on the great south lode, we have opened on its course about six feet; its size is eighteen inches, composed of capel, spar, mundic, and stones of copper ore. On the middle lode, at the thirty fathom level, going west, we find the lode to be from ten to twelve inches wide, producing a large quantity of mundic, and a portion of copper ore, but not rich for the latter. At this level we are also driving south on the silver-lead lode, which is at present from eight to ten inches wide, yielding good work, ground not quite so favourable as last week. During the past week we have had two men driving west from the winze, on the new copper lode, at 35*s.* per fathom, where we have a lode eighteen inches wide, yielding two tons of ore per fathom, with very hopeful appearances. The new pitch, set on this lode last setting, is looking favourable. The other three pitches are still producing about the usual amount of ore. Hurl Down cross-cut is progressing speedily; we have driven about seven fathoms north of the shaft. F. R. ROWE.

CORNUBIAN MINING COMPANY.

April 3.—We have set sixteen pitches, varying from 19*s.* to 7*l.* per ton, and in the said pitches there are employed forty-three men on tribute; we have eight tutwork bargains, employing thirty-four men. At the fifty fathom level, driving west of engine-shaft, on Chiverton lode, it is two feet wide, and passing through good tribute ground. In the north side of this level we have just cut into the counter lode, which we find also very promising; it is two feet wide, and is likely to produce, from present appearances, a great quantity of good work; the lead appears in this place to hold down quite as strong as at shallower levels, and our opinions are that it is richer for silver—a very promising level. Our last parcel of thirty-five tons, sold on the 26th ult., brought 16*l.* 13*s.* 6*d.* per ton. We shall now prepare for the sinking of the engine-shaft to a sixty fathom level, but will require the whole of this month before we shall be able to get our new bottom for the plunger lift made at the foundry, and as well other necessary alterations required in the present pitwork; no time, however, will be lost in carrying into effect an object so desirable. The fifty fathom level, driving east, on Chiverton lode, is two feet wide, four inches of which is a rich leader of ore. At the forty fathom level, driving east, we have an improvement; the lode is become large, and yielding some good stones of ore. In the thirty-two fathom level we are driving east on the north counter lode; at present it is unproductive, but we consider, as it is large, and imbedded in a very soft and congenial-looking stratum, that there is a great chance of meeting with something valuable in this lode—at all events, it is an object well deserving our attention. The other operations on tutwork are sinking of shafts, driving cross-cuts, &c., and which I can only add are in easy and cheap ground. In conclusion, I beg to say, that Cornubian Mine assumes a very encouraging aspect, and, with a little patience and perseverance, there are reasonable grounds to hope and expect she will make a lasting and profitable concern.

TAMAR SILVER-LEAD MINING COMPANY.

April 5.—In the 135 fathom level the lode is much the same as stated for some time past, it is about two feet wide, intersected with a small quantity of ore. In the 125 fathom level the lode is nine inches wide, at present poor. In the 115 fathom level the lode is six inches wide, carrying a rich branch of silver-lead ore. In the 105 fathom level we are at present cross-cutting west as described by Capt. Rowe in his monthly report. In the ninety-five fathom level the lode is three feet big, one foot of which is good work. In the winze, sinking from the seventy-five to the eighty-five fathom level, the lode is one foot wide, producing some orey work. In the tribute department, we are, on the whole, looking favourable, particularly in the back of the 105 fathom level; and, judging from the present prospect, we expect to have a larger sampling for the next than the last. MARK JAMES.

TINCROFT MINING COMPANY.

April 6.—I am glad to say that the eighty-one and seventy-two ends have improved for copper during the past week. The ninety end will produce about two tons of copper per fathom. The 100 end is now passing through a cross-course. The engine-shaft and other levels continue much the same as last reported. Our pitches, on the whole, are looking better for tin and copper. We are sinking the water pretty well at Palmer's shaft. The lode in the new engine shaft is twenty inches wide, with plenty of mundic and good stones of copper ore. W. PAUL.

TRETOIL MINING COMPANY.

April 5.—The lode in the forty fathom level east of engine-shaft is about one foot wide—tribute ground; eight fathoms driven last month, much the same. The lode in the forty fathom level west of engine-shaft is twenty inches wide—tribute ground; four fathoms driven last month, good tribute ground. The lode in the thirty fathom level east of Williams's shaft is one foot wide—good tribute ground; about eight fathoms driven last month—three fathoms unproductive—five fathoms tribute ground. The lode in the twenty fathom level east of Williams's shaft is six inches wide—tribute ground; five fathoms and a-half driven last month—two fathoms good tribute ground; three and a-half fathoms tribute ground. The lode in the ten fathom level east of Williams's shaft is small and unproductive; seven fathoms driven last month—three fathoms very good tribute ground, two fathoms tribute ground, and two fathoms unproductive. The part we are driving on of the Mine Park lode, at the adit level, is one foot wide, producing a small quantity of ore; three and a-half fathoms driven last month—much the same. Tregellas's lode, at the adit level, is about fifteen inches wide—unproductive; four fathoms driven last month; three fathoms producing a small quantity of ore, and one fathom unproductive. The rise, in the back of adit, west of Williams's shaft, is suspended; nine fathoms driven last month—unproductive. Last Friday (our setting-day) twenty-one pitches were set in different parts of the mine:—two at 11*s.*; one at 10*s.* 6*d.*; four at 10*s.*; one at 9*s.* 6*d.*; one at 8*s.* 6*d.*; two at 8*s.*; two at 7*s.*; two at 6*s.* 8*d.*; five at 5*s.*; and one at 4*s.* 3*d.*

H. WILLIAMS. J. MORCOM.

MINING NOTICES.

[Under this head we purpose collecting such paragraphs as may appear in the provincial and other Journals, having reference to discoveries and improvements in mining operations at home and abroad. It is hardly necessary to observe, that we must not be considered to admit the correctness of the information conveyed, which, in too many instances, requires cautious investigation—the sanguine expectations of parties in some instances, and the want of honesty in others, throwing a degree of responsibility on a Journal in giving publicity to reports, which we do not intend taking upon ourselves.]

DIAMOND MINES AND GOLD MINES IN SUMATRA.—It is stated in letters from Amsterdam that a diamond mine has been discovered in the district of Duindalo, in the southern part of Sumatra, which, according to all appearances, is as rich as the most abundant of those of Bornoo. The mine is to be worked by the Government. The gold mines of Benjot, and of Kampong Kardi, in the same island, which have only been worked since 1837, become more and more productive the deeper they are cut. From those mines, where formerly the gold was found only in the form of powder, masses of gold are now obtained, weighing from two to three, and even as much as four pounds.—*Innovateurs' Advocate.*

IRON TRADE IN BERWICK.—There has of late been a great and gratifying increase in the manufacture of articles of iron in this place, all the three foundries having been for some time in full and active operation. The schooner *Leith* sailed from this on Saturday last for London, with a cargo of 150 or 170 tons weight, consisting of miscellaneous articles manufactured at Helen Iron Works, varying from 1 cwt. to a few pounds each. This is by far the largest exportation of this species of manufacture ever sent from this port. The *Enterprise*, also, a short time ago, sailed with a cargo of 125 tons of similar articles manufactured in the same works. Mr. Guthrie employs between eighty and ninety workmen at the Helen Iron Works, and forty or fifty at the old foundry, and a large number are also employed by the Messrs. Robertson in their extensive establishment at Tweedmouth.—*Edinburgh Adv.*

STRATHGLASS LEAD MINE.—Lord Lovatt has leased out to an English gentleman, Mr. Thomas Dodd, the lead mine lately opened on his lordship's property in Strathglass. The mine consists of lead ore and barytes, is five miles in length, by two and a half in width. The object of Mr. Dodd is to form a company for working the above mine, by raising a capital of 200*l.* in shares of 5*l.* each.—*Caledonian Mercury.*

PROCEEDINGS OF PUBLIC COMPANIES.

BLAENAVON IRON AND COAL COMPANY.

An extraordinary general meeting of the shareholders of this company was held at the London Tavern, on Tuesday, the 6th instant.

F. WARDEN, Esq., in the chair.

The CHAIRMAN proceeded to state, that the views of the directors were embodied in the report, and, after the mature consideration they had given it, and the great interest which the directors themselves had in the undertaking, the shareholders must consider that as a guarantee, and that the course which had been recommended for their adoption was the one most likely to be beneficial to the proprietors at large. He begged to remove an erroneous impression which had gone abroad, that the company required to raise 100,000*l.* in addition to the sum mentioned in the report. He requested Mr. Scrivenor to state to the meeting the state in which he found the works of the company upon taking the management—also, to answer any question that any proprietor might suggest.

The SECRETARY then read the report, the substance of which was as follows:—That of the sum of 150,000*l.*, authorised to be raised on the security of debentures, 36,000*l.* had only been obtained. The capital represented by the new shares (viz., 100,000*l.*) is designed to serve the double purpose of forming a fund to pay off these debentures, when required, and also to supply the means for completing three new furnaces, and an extension of the present forge and mill. It went on to state, that their new manager reported that he found the outlay upon the works had proceeded so far that it will require no more than 22,000*l.* to put in blast these three new furnaces; and, including the other necessary outlay, the alterations recommended at the forge and mill will not exceed 5000*l.*—making in all, for the works, 27,000*l.* By these alterations, their weekly "make" may be increased to 300 tons, which will render it unnecessary to erect a forge and mill at the new works—at the same time, the manufactured iron will embrace a greater variety than hitherto, and will command, it is hoped, a ready sale; a further sum of 33,000*l.* is required as working capital. Thus, 60,000*l.* may be assumed as the sum necessary to place the company in possession of eight furnaces, capable of producing between 600 and 700 tons of iron per week. The increase of permanent capital, proposed to be created by the issue of 2000 new shares—viz., 100,000*l.*—together with the amount uncalled for on the original shares—viz., 30,000*l.*—would be appropriated in the following manner:—Additional outlay on works, 27,000*l.*; reserved for liquidation of debentures, 36,000*l.*; loan from bankers, 20,000*l.*; working capital, 33,000*l.*—116,000*l.*; surplus, 14,000*l.*—Total, 130,000*l.* The report laid before the proprietors at the meeting of the 24th of April, 1840, showed that the aggregate profits of the Blaenavon Iron and Coal Company, during the three and a half years of the company's existence, then amounted to 92,000*l.* The amount paid in dividends, computed upon the joint-stock capital, from the periods at which it had been advanced by the shareholders, averaged upwards of 8 per cent. upon the investment for the entire period; but, computed upon that part of the capital only which had been productive, the amount paid as dividends averaged upwards of 10 per cent. for the same period. Since that report was made 5*l.* more (making 45*l.* per share) has been paid up. Now, assuming the year 1840 as wholly unproductive, it would yet appear, that, by throwing the profit of the first three years and a half over the whole four years and a half, the shareholders have received a dividend at the rate of 8 per cent. per annum upon the capital paid up, since the formation of the company; or, deducting that portion yet unproductive, 7 per cent. per annum. It also appears that the average net profit per annum at the old works, after deducting all expenses in London, has been 19,296*l.* Assuming then, from this result, a profit of 4000*l.* per furnace per annum, five furnaces would give 20,000*l.*; deduct interest on debentures and loans, 6500*l.*—leaving 13,500*l.*, which, if divided, would allow only 32*s.* 6*d.* per share, being less than 4 per cent. per annum upon the (paid-up) capital. But if the capital of the company is not increased, it may be necessary to appropriate the sum of 5000*l.* annually towards the liquidation of the mortgage, reducing the amount to be divided to 8500*l.*, yielding a dividend of less than 2½ per cent., until the mortgage be paid off. The amount borrowed, however, including the sum of 36,000*l.* due to debenture holders, is 56,000*l.*, towards the discharge of which, the sum remaining uncalled for upon the old shares (viz., 30,000*l.*) is available—leaving a balance of 26,400*l.* still unprovided for. Assuming, then, 4000*l.* as the average profit per furnace upon eight furnaces, the amount of profit would be 32,000*l.*; add rent saved, 500*l.* per annum, on three furnaces built on the freehold, 1500*l.*—33,500*l.* From this must be deducted—Interest on mortgage, 2500*l.*; interest at 8 per cent. on 40,000*l.* (expected to be called up on the new shares), 3200*l.*; interest on debentures, loans, &c., 5300*l.*—11,000*l.* There remains 22,500*l.* to be divided, giving 55*s.* per share (4 *e.*, exceeding 6 per cent.) on the old shares, and leaving a surplus to be added to the reserved profits.

Mr. SCRIVENOR entered into a brief statement of the state of efficiency of the company's works, and concluded by recommending an increase in the make of boiler plate, which commanded a ready sale, and for which their iron was well adapted.

Mr. EMANUEL ZWILCHENBART, on the part of the Liverpool shareholders, put some questions to the secretary, but, at the request of the chairman, they were postponed until the next meeting.

A resolution, embracing the principal points of the report, was then moved by Serjeant TADDY, and seconded by Mr. JONES, and carried unanimously.

After a few observations from Messrs. Evers, Sewell, and Morgan, thanks were voted to the chairman and directors, and the meeting separated.

WEST LONDON RAILWAY COMPANY.

An adjourned especial general meeting of the shareholders of the above company was held at their offices, Abchurch-lane, on Monday, the 5th inst.

W. MORGAN, Esq., in the chair.

The CHAIRMAN opened the business of the meeting, by giving to the shareholders a statement of the affairs of the company, which he represented as being in a most distressing state; committee after committee had been formed, and meeting after meeting called, and as yet no resolution had been come to that would in any way meet the wants, or even the necessities, of the company; creditors were urgent for their demands—landholders saying, either give us our money or return us our lands—landlords pressing—the loss by lawsuits enormous—and even the very works, that had cost so much labour and money, were crumbling away before their eyes, all for want of money—of a mere sum, that is as nothing compared with the greatness of the undertaking, and the profits that, when once completed, it must yield. The Act they had obtained was more satisfactory, and gave them greater powers than even the most ambitious among the shareholders could have expected, and, should they then, for a few pounds, lose the whole that they have expended, and let their rains remain to make them the laughing-stock of the public? Several plans have been laid before the shareholders, but none had been carried out; they must now return to the plan as first proposed by the directors—viz., to carry on steam from one canal to the other, and from that to the river and to Knightsbridge; whether this plan will be supported by the shareholders remains to be proved; it appeared to him that there were no objections to it; as the negotiations with the landholders had terminated so favourably, the company had obtained their object in almost every instance. An arrangement has been entered into with the creditors, who have agreed to wait for one year, provided the canal plan is finished; the water companies have acted very liberally—indeed, the public generally have evinced a great interest in the concern, for, only taking the drainage of the railroad into consideration, a great national benefit must accrue, by the advancement of the health of the community. Another company is only waiting for the commencement of this railway to carry it on to Deptford, and the iron boats are about to proceed beyond where it stops; with these advantageous prospects it would be madness for us to stop. Money must be raised, and the question now before the meeting is, how to obtain it? Time is of the utmost importance, and, if the railway is to be proceeded with, it must be done immediately; new shares must be issued, with equal advantages to the new as with the old holders. He (the chairman) said the sacrifice was great, but what else could be done. They have an engineer of great ability, and contractors who would finish the work in a very short time. The chairman then concluded, by recommending unanimity among the shareholders, and trusted that they might part with good feeling, and better prospects than hitherto.

Dr. CARPUE thought the chairman had not given a very flattering account; from his own knowledge, he could say that the railroad was not in so deplorable a state as had been said before the meeting. He lived at Shepherd's Bush, and had walked since the last meeting over all the works of the company, which he found in a most excellent state—indeed, the whole of the embankments and the bridge from Shepherd's Bush to the Great Western Railway were in the greatest state of perfection. A vote of thanks from Parliament ought to be given to the company, as their drainage had rendered Shepherd's Bush one of the most wholesome places in the environs of London, instead of being, as it was a few years back, one of the most unhealthy. Before the company commenced operations he gave 150*l.* per acre for some land in the lane leading to Wormwood Scrubbs, which, from the improvements, is now worth 400*l.* per acre.

Mr. J. WHITE gave in twelve papers, and some plans for carrying on the railway, which were decided, before the meeting separated, to be utterly impracticable. He also mentioned a method by which the company might become extricated from all their difficulties, by selling the land at their farm (seventy-three acres) for 500*l.* per acre; but the only difficulty was, that nobody would give more than 150*l.* per acre for it. He then laid his plans and papers on the table, with the understanding that the directors were to supply him with copies of them.

Mr J. S. LESLIE urged that the last meeting was adjourned only to get to something definite; if they did not carry on the present line somebody else would, on the advantages were so very evident; it only remained to be decided whether the whole of what they had hitherto subscribed should be lost, or if they should subscribe 2*l.* per share to save it, and, indeed, return a profit to the pockets of the shareholders. The chairman had said that delay was ruinous—it was, indeed, and if anything was to be done, the sooner they set about it the better, for all parties concerned. He (Sir John) then moved—"That the line be completed with one line of rails from the Kensington Canal Basin to the Grand Junction Canal, for which purpose 40,000*l.* should be raised, in 20,000 shares of 2*l.* each; such shares to be entitled to all the advantages of the 20*l.* shares, to be rateably divided amongst the proprietors, and, in the event of their refusing them, to be offered to the public at large, to be paid for by four instalments of 10*s.* each—the first at the time of allotment, the second on the 5th of August, the third on the 5th of November, and the last on the 5th of February, 1842—a scrip to be issued on the payment of the first allotment."

Mr SHEPPARD, M.P., moved, as an amendment—"That the line do stop at the Kensington-road;" he thought that 20,000*l.* would be sufficient to cover all expenses, which he proposed to raise by 5*l.* shares, and, if that was agreed to, he would at once double the number of his shares, and pay the cash at once.—Mr. J. WHITE seconded the amendment.

Mr. CORDON also moved, as an amendment—"That 60,000*l.* be raised by shares, at 16*l.* per share;" but the general voice of the meeting being against the amendment, he withdrew it.

The CHAIRMAN having proved Mr. Sheppard's amendment as impracticable, on account of having no ground where a station could conveniently be formed, he, with the consent of Mr. White, withdrew it. He (the chairman) also informed the meeting that Mr. White's plan for raising money by mortgage had been unsuccessfully tried, as nobody would lend it—in fact, the company's securities were valueless.

Mr. M'FARLANE explained to the meeting that he would only consent to the money being raised by new shares on condition of its being invested in the hands of trustees, so that the directors could not apply it to any other purpose but that of completing the railway—viz., 32,000*l.* to the railway, and 8000*l.* to pay sundry small debts.

Mr. DUNCOMB (solicitor to the company) said the resolution was drawn up in such a manner, that the money could be applied to no other purpose.

Some discussion took place, as to whether fourteen or twenty-one days should be given after the date of the calls, before the shares which remained unpaid were to be forfeited, which was settled ultimately at fourteen days; also, as to whether the shares were to be decidedly forfeited, or whether it should be optional with the directors—the latter method was agreed to.—The resolutions were then put by the chairman, and carried nem. con., for, Mr. WHITE said his name should never appear to a unanimous agreement.

Mr. SHEPPARD, M.P., was anxious that something should be done for the benefit of the poor shareholders who might not be able to pay the additional 2*l.* per share. After a long discussion, it was decided that the Act would allow of no distinction between the shareholders.

It was moved by Mr. M'FARLANE, and seconded by Mr. LUARD—"That the land remaining of the farm should be sold, either by public auction or public tender"—which was carried unanimously.

Thanks were voted to the chairman, and the meeting separated, the discussion having lasted 3½ hours.

BAHIA STEAM NAVIGATON COMPANY.

An adjourned half yearly general meeting of the shareholders of this company was held at the George and Vulture Tavern, on Monday, the 5th inst.

JOHN BENSON, Esq., in the chair.

Mr. THOMAS (in the absence of Mr. Cannan) read the advertisement convening the meeting, after which the report and statement of accounts were submitted.—The report, after recapitulating the substance of that laid before the meeting in December last, proceeded to state, that upon the change in the board of directors, the company's affairs were in the greatest confusion—the exclusive right of navigating the waters rendered useless by the terms imposed by the Government—the vessels purchased for the company had proved totally unfit for the employment intended, and even the company's right thereto was daily exposed to litigation, in short, the vessels had been registered by the late board in the name of a single director, the consequence of which was, that on a recent occasion, when the board were requested to affix a price to one of the vessels for delivery at Bahia so desirable an opportunity was lost, the directors being unable to give a legal title to the property in question. They had given positive orders for the return of the unsuitable boats, but the agents have urged on the directors to make efforts to sell the boats in Brazil rather than send them to England. The gentleman deputed to Bahia to select the site of ground granted by the Government, in his letter stated that the bottom of the *Bahia* was in such a state as would shortly move her out of work, which interruption to the navigation of the bay would cause great dissatisfaction there. They also regretted that the factory for the repairs of the boats, upon the inspection of the gentleman deputed to Bahia, was found devoid of all essential conveniences. The question now was, whether the remaining funds should be employed in a further outlay, for which experience fully demonstrates no returns are to be expected. An outlay absorbing the whole of the subscribed capital had taken place, exclusive of the boats at Bahia, the value of which was undefined, and which are the subject of a suit in Chancery. The funds were quite inadequate to the prosecution of the undertaking; in such a position the only resources would be the receipt of remittances from Brazil, which cannot be calculated on; under such circumstances, the board have come to the conclusion that the further prosecution of the objects of the company should be abandoned.—The statement of accounts showed the following results:—total receipts, 12,113*l.* 1*s.* 3*d.*; expenditure, 4486*l.* 3*s.* 6*d.*; balance, 7441. 0*s.* 9*d.*; Exchequer bills, 6000*l.* 16*s.* 10*d.*

The CHAIRMAN called the attention of the proprietors to the report, which was a clear statement of their affairs, and upon which it was unnecessary for him to comment; also, he begged them to adopt, with united feeling, the course to be taken.

Mr. DARBYNE wished the 51st clause of the Deed of Settlement, referring to the dissolution of the company, to be read.

A SHAREHOLDER asked if a dissolution of the company would affect the Chancery suit?—Mr. THOMAS replied that it would not, the proceedings having been instituted by certain parties individually.

Mr. WILLIAMS inquired in what position they stood with regard to Mr. Heathorn?—Mr. THOMAS said that the purchasing of the vessels had been entrusted to Mr. Heathorn, as well as coals, and it appeared that Mr. Heathorn had the vessels registered in his name, instead of that of the company, and that he had also sold the company one of his own ships, upon which he had charged a commission, and had obtained large discounts in the purchase of coals, which had not been allowed to the company; the proceedings had been instituted in Chancery, to compel Mr. Heathorn to transfer the register of the vessels, or, until that was done, none of the vessels could be sold.—It was then moved by Mr. PALMER, seconded by Mr. DARBYNE, and carried unanimously, that the report be received and adopted.

Thanks having been voted to the chairman, the meeting separated.

HEREFORDSHIRE AND GLOUCESTERSHIRE CANAL.

On Tuesday, the 6th inst., a meeting of the shareholders in the above-mentioned undertaking was held at the Feathers Hotel, in Ledbury.

Rev. K. E. MOREY in the chair.

The report of the committee stated that they had attended without relaxation to the state of the expenditure and to the progress of the works, which were going on most satisfactorily, and continue to have well grounded assurance that the expenditure will be within the estimate. The committee had not yet availed themselves of any pecuniary resources, excepting those arising from the calls on the shares. They had had offers from Government of a loan, but thought it prudent to decline accepting it for the present, in the expectation that such improvement may very shortly take place in the money-market as will enable them to raise the loan required on much more favourable terms.

After some observations from several proprietors, expressive of their approbation of the proceedings of the committee and the prospects of the company, the chairman remarked that the next duty which devolved upon them was to fill up the vacancy which the lamented death of the late Earl Somers had caused in their committee. Some remarks were then made by T. Spencer, Esq., and the present Earl Somers was unanimously elected a member of the committee of management. The thanks of the meeting were voted to the chairman, who, in returning thanks, expressed the pleasure he felt in anticipating the completion of the canal to Hereford, and trusted that all would, as much as lay in their power, individually assist in the furtherance of so desirable an object, calculated as it was so materially to benefit that county.

MINE ACCIDENTS.

Wheal Owles.—On Tuesday, the 23d ult., as John Hoskin was at work at Wheal Owles Mine, and had prepared a hole for blasting which did not ignite, after waiting the usual time, he returned to ascertain the cause, when, as he was preparing to clean out the hole again, it instantly exploded, but fortunately without doing him any other harm than throwing him into 6*fa.*

Cleadford Iron Works.—At these works, on Tuesday last, James Turner, who was filling the furnace with fuel, slipped, and fell into it. He was seen by one of the men, at a distance, in the act of falling, but ere he could arrive at the furnace mouth not an atom of the poor man was to be seen—the flames had consumed him in a moment.

IMMENSE EXPENDITURE OF GUNPOWDER IN BLASTING.—In cutting through the Bishop's Lane Ridge, of the Glasgow and Greenock Railway, no less than 300 tons of gunpowder have been used in blasting by the miners engaged in that operation.

THE MINERS' COMPANY.—The court of assistants of the Governor and Company of Copper Miners in England hereby give notice, that the HALF-YEAR'S DIVIDEND declared this day, will be payable at their house, No. 5?, Old Broad-street, on Thursday, the 15th inst., and on Wednesdays and Thursdays following from Eleven till Two o'clock.

Office of the Governor and Company of Copper Miners in England, Old Broad-street, London, April 6.

THE MINING JOURNAL

Being extensively circulated among the monied and influential interests, offers peculiar advantages and facilities in giving publicity to all matters with which the capitalist, and the proprietor in joint-stock companies, may be interested. The advertisements inserted in the Journal are confined to prospectuses of new undertakings; notices of meetings, calls, and dividends; contracts for works; sales of mineral and landed property; descriptions of new mechanical inventions; scientific institutions, works, and notices—thus all advertisements possess the unusual advantage of being associated only with others of a like nature, and being brought immediately under the notice of the parties interested.

SCALE OF CHARGES.

One column	£5	6	0	*Twenty lines*	£0	16	0
Half a column	3	5	0	*Fourteen lines*	0	12	0
Quarter of a column	1	12	0	*Ten lines*	0	8	6
Eighth of a column	0	16	0	*Eight lines*	0	7	6

MEETINGS OF SCIENTIFIC BODIES.

IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Medical and Chir.	53, Berners-street	Tuesday	8½ P.M.
Zoological	28, Leicester-square	Tuesday	8½ P.M.
Royal Botanical	49, Pall-mall	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	7½ P.M.
Graphic	Thatched-house Tavern	Wednesday	8 P.M.
Botanical	20, Bedford-street, Cov. g.	Friday	8 P.M.
Royal Asiatic	14, Grafton-street	Saturday	2 P.M.
Westminster Medical	Exeter Hall	Saturday	8 P.M.

PUBLIC COMPANIES.

MEETINGS.

Chester and Birkenhead Railway	Clarendon Rooms, L'pool	Apl. 10	12.
Maryport and Carlisle Railway	Station, Maryport	10	11.
Rocks Tin Mining Company	George and Vulture Tavern	14	1.
Blaenavon Iron and Coal Company	London Tavern	23	1-2.
Bastenne and Ganjac Bitumen Co.	St. Mildred's-court, Cornhill	23	1.
Newcastle-on-Tyne & Carlisle R'way	66, Close, Newcastle	27	12.
Cornwall Great United Mines	George and Vulture Tavern	29	2.
Newport Docks Company	Office, Newport	May 6	12.

CALLS.

East Tretoll Mining Company	£a	April 10	Barclay, Bevan, and Co.
Wheal Leeds Mining Company	£a	10	Barnett, Hoares, and Co.
Polberen Mining Company	£a	14	Bosanquet and Co.
South Australian Company	2½l.	15	Ladbrokes and Co.
London and South-Western Railway (Gosport Branch)	5l.	15	Williams and Co.
Southampton Docks	5l.	15	Williams and Co.
Redmoor Mining Company	10s.	21	Bosanquet and Co.
Great North of England Railway	10l.	21	J. Fraser, Darlington.
Agricultural and Commercial Bank of Ireland	10l.	21	Office.
Hartlepool Dock and Railway	7½l.	21	Barnett and Co.
Wheal Wallis Mine	£a	May 10	Manchester & L'pool Dist. Bk.
Hungerford and Lambeth Suspension Foot Bridge Co.	2l. 10s.	15	London and County Bank.
Rio de Ancot Gold-stream Works	10s.	22	Stone, Martin, and Co.
Cambrian Iron and Spelter Co.	2½l.	June 1	London Joint-Stock Bank.

DIVIDENDS.

United Hills Mine Company	10s. per share	Office, Adam's-court	Apl. 15.
Commercial Bk. of New Orleans	4 per cent.	Reid, Irving, and Co.	16.

NOTICES TO CORRESPONDENTS.

Mr. Prideaux's paper "On the Wet Assay of Copper—Correction by the Blowpipe," shall appear next week, we were unable to get the diagrams ready in time for this.

Anthracite Coal.—The letter referred to by our Dolgelly correspondent has not come to hand; on reference to another column he will find we have made some use of the information furnished.

Ventilation of Mines.—The paper will be very acceptable.

Received.—"Mr. A. T. J. Martin."—"S. E. T."—"Verax."—"J. Williams."—"A Constant Reader."—"S. T."

TO CORRESPONDENTS AND SUBSCRIBERS.

The office of the Mining Journal is removed from Gough-square to 37, New Broad-street, City, to which address all advertisements, communications, &c., must, in future, be directed.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, APRIL 10, 1841.

It is now some time since the subject of the use and properties of anthracite has been mooted in our columns, which is a matter of surprise, when its increasing consumption in the United States is considered, and the many purposes to which this description of fuel might be advantageously employed, whether for steam-engines, furnaces in the smelting of ores, or for domestic purposes. On referring to a Table, which was inserted last week, we find that the quantity of anthracite raised in the United States in three years, ending 1830, was as follows:—Schuylkill, 215,458 tons, or less than one-half the produce of 1840, which amounted to 452,291 tons—the aggregate produce for the three years ending 1840 being 1,329,583 tons, or more than six times the quantity raised in the like corresponding period ending 1830. At Mauch Chunk the quantity raised in three years, ending 1830, was 97,092, and for the like period ending 1840, 395,314 tons—or an increase of 300 per cent. For Beaver Meadow, Hazleton, Sugar Loaf, Pine Grove, and Shamokin, it does not appear, from the returns, that any coal was raised until 1837, when the quantity is set down as 51,617 tons, while the returns for 1840 are 162,383 tons. At Lackawanna, in like manner, the output has increased, which, in 1830, produced only 43,000 tons, while the returns for 1840 is 148,470 tons. Thus, in 1830, the whole quantity of coal raised from these several districts amounted only to 174,774 tons; the returns for 1840 showing the quantity in that year to amount to no less than 865,308 tons—being five times the quantity. We may here remark, that the total quantity raised from 1831 to 1840, both inclusive, was 8,942,301 tons; the consumption, which, in 1832, was estimated at 177,000 tons, having increased, in 1839, to 867,000 tons.

With results such as these, it is, we repeat, surprising that an interest so important should, in this country, be comparatively lost sight of. It is true, that a South Wales Anthracite Association was established—or, perhaps, we should say, rather endeavoured to be so; but, it must be admitted, there is a vast difference between the United States and South Wales—in the one there is enterprise and perseverance—and there the "go-a-head" principle, or system, is in full swing; whereas, in Wales, there is a want of energy, which makes us at times wonder how many centuries after the civilization of other parts of the globe that this district became first populated.

Since writing the foregoing, we have received the reports of the Coal Mining Association of Schuylkill County, United States, which possess too much interest to be hastily glanced at; to these our attention will be more immediately directed, and in an early Number we hope to present an article of interest to our readers: in the interim, we invite our correspondents to the discussion of a question, which becomes the more important from the advances daily making in the United States; they do progress most assuredly, and they have our best wishes for success—at the same time we cannot disguise from ourselves that we are half angry with our anthracite proprietors at home to find them so insensible to their own interests, and to the advancement of the interests of the community at large, by the employment it would afford to a large class of the labouring population.

The intention of Government to institute an inquiry into joint-stock companies, with a view to the prevention of fraud, has caused increased bustle in more than one establishment in the arrangement of the books and documents, so as to be prepared, when the time arrives, for rendering an account of themselves. If the committee appointed, however, only fulfil their duties, we apprehend that the exposition of fraud which must take place will lead to some legislative enactment, whereby the public will henceforward be protected from the designing arts of unprincipled projectors. It will not, however, be sufficient to provide for the future, but the past claims their especial attention, not only with the view of acquiring information whereby the committee may be guided in the results at which they may arrive, but to unmask fraud, and subject the concoctors and abettors of those fraudulent acts which may come before them in the course of the investigation to the consequences attendant on their conviction. The task will be an ungracious and unpleasant one to perform—much mystery will have to be unravelled, and some private feelings, and, perhaps, private interests sacrificed, in arriving at the truth; but, the several acts of fraud practised (in some instances under the protection of an Act of Parliament), which have been exposed even through the columns of the Mining Journal, are fully sufficient to justify a Parliamentary inquiry. We will not, on the present occasion, cite the several companies to which we think the attention of the committee should be first directed, nor the individuals whose evidence is necessary to expose the system of chicanery and fraud which has been pursued for some time past. This, however, we may hazard, by way of anticipatory observation—viz., that the companies formed for life assurance within the past ten or twelve years have decidedly a first claim on the committee, and we hope that they will enjoy the preference. There are some few questions of a general nature which, we think, might be put in all cases, the answers given being confirmed by the production of the books of the company. Amongst others, we consider the following pertinent to the objects of the inquiry:—

What the amount of capital subscribed, and number of shares taken on the company being formed and business commenced?

What the amount of capital now paid up, and how invested, distinguishing the several securities held by the company on the sums invested or advanced?

What the number of policies for life insurance, the amount for which the aggregate is insured, and what the total amount of annual premiums?

What the average life, probable term of duration, annual premium, and annual payments contemplated on the falling in of lives according to the scale on which insurances are effected?

What the difference, if any, in the scale of insurance as compared with those of other companies?

What the amount of policies which have fallen in since the formation of the company, and what the total amount of premiums received?

What the annual receipts of the company, distinguishing the separate years, and the sources from whence they were derived?

What the expenditure, in like manner, for each year, distinguishing whether payments made on policies, directors' salaries, office expenses, law charges, advertisements, &c.?

What the proportion or per centage which the expenses (exclusive of payments on the demise of the insured) bear to the annual receipts?

What the estimate of assets compared with liabilities?

What the number of directors, and mode of remuneration?

What profits have been, divided among the proprietary and the insured?

What rate of interest so paid on the capital subscribed?

What the present state of the affairs of the company, supposing a cessation of business, showing the increase or decrease which has arisen to the capital invested?

These, and many other questions of a like nature, we think, should be put in every case, and which, if fairly answered, would at once lead to the line of examination to be thenceforward pursued, for well satisfied are we that the *exposé* which would take place under such circumstances would have the effect of annihilating many *thriving* establishments, and, by the publicity afforded to the evidence, not to advert to the measures which Parliament might deem it right to adopt, would open the eyes of the public, and act as a beacon, of which they would cautiously steer clear. Our attention will be directed to the proceedings of the committee, who, we trust, will not only report on companies now existing, but those defunct—on subject of which we believe Mr. Alderman Thomas Talacre Wood could give some interesting and useful information.

We understand that the special committee of the Durham County Coal Company have appointed Mr. Matthias Dunn, colliery viewer, to investigate and report upon the state of their colliery matters, preparatory to the general meeting of the company on the 27th inst. Having before had a good deal of experience of the tricks practised at general meetings, we strongly advise the shareholders, as they value their great responsibilities, to make a point of attending, to hear the state of their concerns laid open, and to vote accordingly.

The "President."—No news of the *President* had reached Liverpool up to a quarter past ten o'clock yesterday (Friday) morning. The communication with Holyhead, by means of telegraph, is open. The prevailing opinions amongst persons who cannot bring their minds to believe that any fatal catastrophe has overtaken her, are, either that she has put back to New York or run for Bermuda; in which case a few days longer, and the uncertainty and alarm which prevail respecting the fate of this unfortunate ship may be expected to be *cleared* up and removed.

"Great Western."—This steam vessel sailed from Bristol on Thursday for New York *direct*, at half past one o'clock yesterday (Friday) morning, immediately upon the arrival of the north mail-bags. She took with her forty-three passengers, among whom were Mr. Jenkins, Mr. Baring (*of the firm of* Baring Brothers), &c., and an average cargo. Shortly after her departure, a gentleman arrived express with the morning papers, containing the overland mail and settlement of the China dispute; but he was, unfortunately, too late, and complains loudly that Captain Hosken and the directors had previous notification of his intended coming, and had promised to wait an hour or two for him.

Manchester and Leeds Railway.—The directors are making great efforts to complete the carrying (goods) arrangements in Manchester. Twelve of the arches are now occupied by various carriers, and fitted up with every convenience to enable them to transmit goods on the line.

SMELTING IRON WITH ANTHRACITE COAL.

[From the report of the directors of the Coal Mining Association of Schuylkill County, U.S.]

The important object of smelting iron with anthracite coal, which has lately claimed so much attention, we mentioned in our last report as having been accomplished, and then in successful operation in this place, since which time five other furnaces have been put in blast—viz., one on the Lehigh, near Allentown, one at Phœnixville, one on Roaring Creek, near Cattawissa, and two at Danville. And at Danville two more are already built, that will shortly go into blast; and at Shamokin one stack has been built within the past year, which will soon be put into operation; and we learn that the valley furnace, situated about five miles east of Pottsville, has been rented, and will be put in operation as early as possible the ensuing summer. The number of furnaces using anthracite coal will no doubt be steadily increasing, since it has been satisfactorily settled that there is no difficulty in using this kind of fuel; and the iron, which was apprehended by many would be inferior, has been proved to be of a superior quality, particularly for castings, by possessing more fluidity when melted, and subsequently more compactness, strength, and smoothness.

A series of experiments has lately been performed by Mr. Richard Evans, of Manchester, of the quality of anthracite iron manufactured by the Ystal-y-fera Company, in the Swansea valley.* In comparing the result of his experiments with Messrs. Fairbairn and Hodgkinson's list, he shows a superior strength in favour of anthracite cast-iron of 3½ per cent. He says it is particularly sound, and free from air-holes or defects in casting; and if it is from excess of carbon that iron acquires the several qualities of uniformity, fluidity, smoothness in casting, &c., this metal must be highly charged with it. In ultimate deflection, and power of resisting impact, it also maintains its superiority, and appears to impart great improvement in mixing with inferior ores.

In the report of the committee of judges on iron and steel, in the Franklin Institute of Pennsylvania, we find the following remarks on a specimen of anthracite iron:—"One piece of iron from anthracite pig-metal, from the Crane Iron Works, made into bar-iron at the Boontis Works, with anthracite coal.—This iron is of good quality, and deserves to be particularly noticed, as it goes to establish the fact that good iron may be made with anthracite coal exclusively, and also with a great saving both of metal and fuel; it is stated by the makers, that the whole waste of metal during the conversion does not exceed 12 per cent. Such facts we think are very encouraging to those engaged in making these experiments."

The amount of concurrent testimony throughout the country, sustaining these important facts, must be highly gratifying to all those who are interested in coal lands or coal operations, inasmuch as the manufacture of pig and bar-iron, in our own State, where ore is abundant, and the subsequent conversion of this iron into the various articles required in civilised life, must even very soon consume an immense amount of fuel.

* *See* Journal of the 22d of August last.

EXPLOSION OF BOILERS.

On Tuesday evening last, at the usual weekly meeting of the Institution of Civil Engineers, among other papers, there was read an abstract of a paper by Dr. Schafhaeutl, which the author (who was present) illustrated by a small apparatus he had with him, to show that the bottom of the boiler was blown away before the top, in case of an explosion, or rather that the explosive force reached the lower part before the upper, and that therefore "the present safety valve was, in many cases, little better than useless." Mr. Josiah Parkes made many remarks on the doctor's experiments, and generally on the causes of the bursting or explosion of boilers. He gave several extraordinary instances of the different effects of explosions, and argued that there must be different causes to produce those various effects. In some cases the accident resulted from there being no water, or only very little, in the boiler; in others because there was too much; in some because the existing safety valve was closed; in others because it was suddenly opened; and in some cases because there was neither water nor steam in the boiler, nor fire below it. He gave examples, and where the consequences had too often been the sacrifice of lives to a very great extent, as well as the destruction of property. After adverting to the accident on the Norwich river in 1817, which he observed appeared to be one of those events that formed part of the "stock in trade" of every writer on steam-boiler explosions, he adverted to one at Stockport which occurred when there was neither fire, water, nor steam present. In that instance, the stoker had, on the Saturday evening, emptied the boiler of its water by knocking up a plug in the bottom, and thereby extinguishing the fire at the same time. The stoker then left the place without having taken off the plate from the top of the main hole. On the Sunday afternoon, about five o'clock, the unfortunate man went to clean out the boiler. He took the cover from the main hole, placed a lantern he had on the top of the boiler, and descended into it by means of the iron ladder. When he was nearly down, he took the light, and brought it into the boiler, and that instant he was sent up about 100 yards into the air, and fell through the roof of the dye-house! The boiler rose many feet, and fell back into its seat. The man was scorched as black as a negro. The engineer who entered the yard about the time to see that the stoker was at his work, heard him in the dye-house exclaiming, "Let me out, let me out, I am *frozen* to death!" He broke open the door, and the poor fellow ran past him into his own house on the premises, and died that night, after minutely detailing how the accident had occurred. Then (inquired Mr. Parkes), what was the cause of that explosion? It could not have been in the boiler, for if it were the force would have acted on all sides of it equally. Then, where was it? He continued, that for many years he had diligently collected the facts attending every explosion he heard of, and was preparing to put them in such a form as to afford facilities for examination; but, in the mean time, he thought it advisable to direct the attention of practical men to the facts, that they might arrive at the causes of those explosions, and the manner in which the force acted. He afterwards spoke of an immense number of explosions, adding, that in iron works it was known that a single drop of water would produce tremendous explosive power in this manner:—if in a puddle furnace a drop of water were placed on the red-hot slag no effect is produced, but if the drop be pressed into the metal with a stick, then it explodes with force sufficient, not only to shatter the furnace, but to blow away the *roof* of the building. The drop of water could not produce steam sufficient to fill the furnace, so that Mr. Parkes supposed the instantaneous generation of steam from even that small quantity of water produced a wave in the air, which was projected with such force as to destroy everything before it.

Mr. Adams's Orrery.—Mr. Adams commenced his popular lectures on Astronomy on Monday last, and will continue them during the ensuing week, at the Adelphi Theatre. The lectures are illustrated with brilliant transparencies and costly moving scenery, by means of which information is imparted in an easy and agreeable manner, and an impression made upon the memory, which it will be almost impossible to forget. To those who have some knowledge from reading of the science, the orrery and apparatus will supply what mere reading can with difficulty convey; and to persons of both sexes who have not the advantages of a scientific education, and to whom mathematical learning is unknown, they will be found exceedingly useful. The doctrine of the tides, of the eclipses, and of the orbit of the stars and heavenly bodies, are clearly explained by the lecturer, and there is this good feature attending the explanations, that whilst they are sufficiently clear to suit all capacities, they are not made pantomimic by the introduction of unnecessary scenery and grotesque representations.

Astronomy.—M. Bessell, a German astronomer, has made one of the greatest discoveries of modern times, by having ascertained the parallax of the double star 61 Cygni. He found, from repeated observations, made from August, 1837, to March, 1840, that the parallax of a Cygni did not exceed 31-hundredths of a second, which places the distance of that star from us at nearly 670,000 times that of the sun, or which is nearly 64,000,000,000,000,000 miles (or more nearly 67,650,000,000,000 miles). This immense distance can better be conceived when we state, that if a cannon-ball were to traverse this vast space at the rate of twenty miles a minute, it would occupy more than 6,000,000 years in coming from that star to our earth; and if a body could be projected from our earth to 61 Cygni at thirty miles an hour (which is about the same rate as the carriages on railroads travel), it would occupy at least 96,000,000 years. Light, which travels more than 11,000,000 miles in a minute, would occupy about twelve years in coming from that star to our earth.

ORIGINAL CORRESPONDENCE.

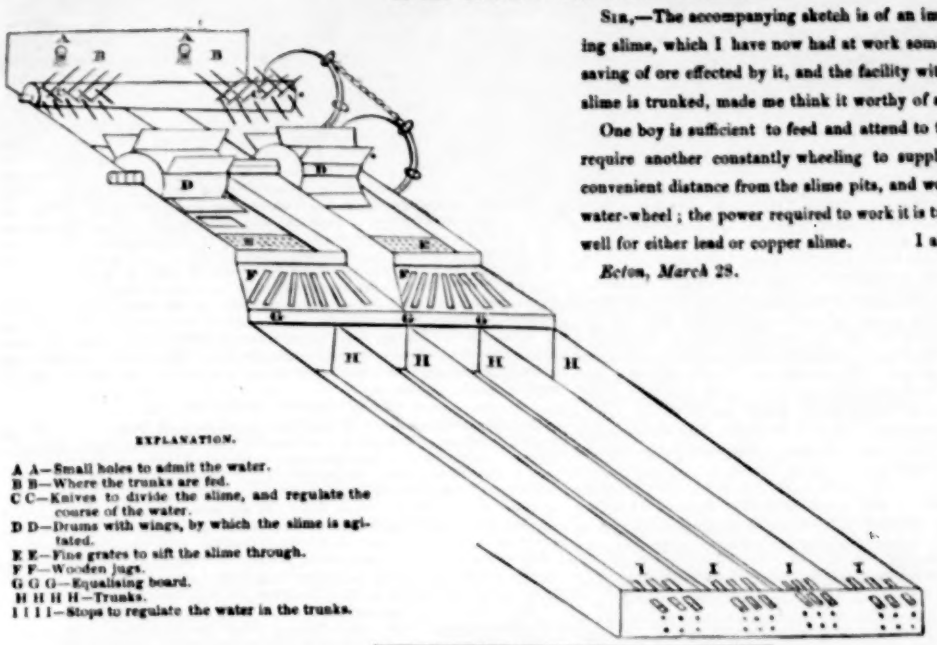
IMPROVED MACHINE FOR TRUNKING SLIME.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The accompanying sketch is of an improved machine for trunking slime, which I have now had at work some time, and, from the great saving of ore effected by it, and the facility with which a large quantity of slime is trunked, made me think it worthy of a place in your Journal.

One boy is sufficient to feed and attend to the four trunks, but it will require another constantly wheeling to supply them. It is placed at a convenient distance from the slime pits, and worked by a rod from a large water-wheel; the power required to work it is trifling, and it serves equally well for either lead or copper slime. I am, Sir, your's, &c.,

Ecton, March 28. A.



EXPLANATION.

A A—Small holes to admit the water.
B B—Where the trunks are fed.
C C—Knives to divide the slime, and regulate the course of the water.
D D—Drums with wings, by which the slime is agitated.
E E—Fine grates to sift the slime through.
F F—Wooden jugs.
G G G—Equalising board.
H H H H—Trunks.
I I I I—Stops to regulate the water in the trunks.

ON THE PREVENTION OF EXPLOSIONS IN MINES AND COLLIERIES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—I think I shall render a service to many of your readers by giving a short review of a work which lately appeared in Belgium. In consequence of the disastrous accidents which had occurred in that country from explosions of fire-damp in the mines, the Academy of Brussels announced as the question for the prize essay, for the year 1840—"To Investigate and Discuss the means of removing from Collieries the Dangers of Explosions;" and the Government offered to stimulate the concurrents by an additional grant to the successful candidates of 2000 francs. Several memoirs were handed in, five of which, with the preliminary report of the committee of the academy, and an appendix of the report of the commission sitting at Liege, on safety lamps, are now published, principally at the public expense, and, with the view of promoting their circulation among the collieries, sold at a low price. The whole form an 8vo. vol. of 448 pages.

1. The first memoir is by M. Boisse, ingenieur des mines, at Carmaux. It is an able review of all that has been done, or is known, on the subject of ventilation. The historical record is correct, and the observations generally judicious, and we read it with pleasure and instruction; but yet we rise from the perusal without knowing what practical remedies we would apply in particular difficulties which would occur; it is, therefore, impossible to give an analysis of it. As one criticism, I may remark, that the author attributes too much to the effect of increased or diminished pressure of the atmosphere, as indicated by the rise or fall of the barometer, in affecting the ventilation, and I cannot concur in his proposal for forcing in air instead of aspirating it, in order to increase that pressure. It is as yet dubious, whether, in the case of a fall of the barometer, the deteriorated ventilation is caused directly by the diminished pressure, or whether that fall is merely coincident with other causes which affect the ventilation; and he does not seem to be aware that the difficulty of forcing in air increases with the distance, much more than when it is aspirated.

2. The second memoir, by M. Gonot, ingenieur en chef des mines, at Mons, is a paper of great merit; indeed, it appears to me the most valuable work which has been published in any country (unless, perhaps, that of M. Combes) on the subject of ventilation. The author takes strong and decided views, and states distinct propositions, supporting them with luminous scientific remarks, and facts drawn from his own experience. Although we may occasionally differ from him, we feel even then that he has instructed us, because he has prepared the questions for our consideration; but in general he commands our assent. What he states may be embraced in the following propositions:—1st. The alleged property of diffusion, or the property by which different gases and vapours mingle, independently of their densities and affinities, if it really exist at all, does not so in such a degree and manner that it is to be assumed as a principle in the ventilation of mines. On the contrary, the author concludes, from his observations, that not only carbonated hydrogen will not mingle with the atmospheric air, under the ordinary current which exists in the Belgian mines, but even, after being mingled, will separate, and occupy the higher part of the drifts. He deduces as a corollary from this, that the drifts must be always conducted so that the carbonated hydrogen may ascend, and never contain workings in the shape of a bell or syphon, in the upper part of which the carbonated hydrogen may lodge. I think entirely with the author on this point; at the same time, as the dragging power of the current of atmospheric air depends on its velocity, I conceive that, in an extraordinary case, where it is indispensable that the current descend, by making the drift low, and regular, and the velocity of the current great, the carbonated hydrogen may be made to descend for a short distance.—2d. In mixtures of different gases and vapours, the tension of the mixture will be the united tensions of the elastic fluids mixed, therefore, as the specific gravity will be in the inverse ratio of the tension, the mean specific gravity of two gases, each of which have the specific gravity 1, will not be 1, but considerably less. (There can be no doubt of this in the case of a mixture of vapour with common air, and I shall suppose with the author, that it is generally true). But if these gases, or vapours, are also specifically lighter than air, then the specific gravity of the mixture will be diminished in a still higher ratio. By mixing, then, with air carbonated hydrogen, the specific gravity of which is only a little more than half that of air, or vapour of water, the specific gravity of which, at a temperature of 20 deg. of the centigrade thermometer, is only 1-64th of that of air, we obtain a mixture of even less specific gravity than the mean of the elastic fluids mixed.

Now, the external air is scarcely ever saturated with vapour; in general it is only saturated to the extent of 4-10ths, and sometimes only to the extent of 2-10ths; whereas, before the air, after coursing the works, ascends, it has become fully saturated. It is evident, then, that, supposing the temperature above and below ground to be the same, the *puits* of the descent and ascent of the air to be equally deep, and the mine to disengage carbonated hydrogen, the more mixture of the hydrogen and vapour in the mine, by making the ascending column lighter than the descending, is sufficient to cause a current. In winter this effect will be increased by the difference of the temperature above and below ground; and in summer—at least, in great heats of summer—it will be diminished; but, still, even in the greatest heats, it may be sufficient, and, in point of fact, extensive mines near Liege are ventilated in this way alone, without either furnace or mechanical aspiration of the air.

The author having clearly established all this, then inquires what is the best mode of rendering activity to such natural ventilation?—The modes now in use are, 1st, mechanical aspiration. The objection to this is, that only about 1-10th of the force of the mechanical mover has hitherto been utilised; and it is probable that such a loss will always occur—that the quantity of air extracted can never be much increased, because that quantity is in the ratio of the velocity, and the velocity is only as the square root of the power applied, and that the mechanical apparatus renders a pit useless.—2d. The use of a furnace, at the bottom of the pit, as practised in the north of England and the north of France; or a furnace above ground, or near the mouth of the pit, connected with a high chimney, as practised in Belgium. The objection to the latter is, that the column is too short to produce a great effect; to the former, besides the inconvenience and danger, that the carbonic acid gas (whose specific gravity is 1½ compared with that of common air) formed by the combustion, and a quantity of solid matter in the form of smoke must be raised, both of which counteract the effect of the disengaged heat, M. Gonot proposes, instead of any of these methods in use, to throw down steam from above ground a considerable distance down the pit. As this mode is quite novel, I shall give his own words:—"I think that the most convenient dispositions would be the following. I would establish at the surface one or two boilers, and connect with them a pipe of twenty centimetres (eight inches) diameter, which I would place in one of the corners of the pit of the ascent of air, which pipe should terminate near the bottom of the pit, having its lower extremity bent back, so as to give to the issuing vapour an ascending direction. The water condensed might run out by a small hole made for that purpose in the bend of the pipe."

After calculating that 1000 kilogrammes of coal (one ton) would elevate eleven cubic metres of air 20 deg. of the centigrade thermometer, and the expense of pipes to be carried down 200 metres, which he says would in Belgium come to about 5000 francs, and making some obvious observations, the author continues:—"A furnace at the bottom fed by pure air projects into the pit of ascent, air which has not served to ventilate the mine, and carbonic acid gas, which augments the weight of the ascending columns; a great part of the heat which it developes becomes latent in the water which it vapourises. It is quite the contrary, when we introduce steam into the air. It occupies at first there a certain volume, which becomes a vacuum when it is condensed; its latent heat becomes sensible, and augments the temperature of the air, and the steam, which is not condensed, augments in an extraordinary degree, by its specific lightness, the velocity of the current. I think, in consequence, that the heating of the air by steam is preferable to all other means hitherto known for giving activity to the circulation of the air in a mine; and I do not hesitate to say that, combined with a proper disposition of the workings, it will nearly render impossible the explosions of carbonated hydrogen in collieries."

Considering the eminent official situation, and high personal character of the author, and that M. Cauchy, who is ingenieur des mines en chef over all Belgium, the reporter of the committee, states—"This memoir, if not the most remarkable, is at least the most useful of all which have been presented; and I would not hesitate to award the prize to its author if the Academy did not think with me, that in consequence of the intervening publication of the work of M. Combes, the prize should not be distributed,"—the proposal of M. Gonot is entitled to much attention.

There is another mode of producing the same effect—viz., by throwing down heated air. I have seen an estimate and offer by an engineer of character, to construct an apparatus to heat and throw down, by the power of a 3-horse engine, twenty cubic metres of air, heated by a heating apparatus to 300 deg. of the centigrade thermometer, a depth of 300 metres, in pipes of sheet-iron soldered in brass, of fifteen centimetres (six inches diameter), with suitable buildings—the whole put up for 6200 francs (about 208*l.*) It was calculated that the heating apparatus, similar to that used for the hot-blast, would consume 750 kilogrammes (about three-quarters of a ton) per twenty-four hours. There would be in addition the coal for the engine.

The author then lays down another principle, that as the number of victims, in case of an explosion, who suffer from being directly and immediately burned and bruised, is comparatively small with that of those who suffer in consequence of want of respirable air after the explosion, there ought to be no constructions in a mine which an explosion would remove to such a degree as to render the immediate resumption of the ventilation impossible. There should, therefore, be neither trap-doors nor brattices, nor any structure in or at the mouth of the pit which could be displaced. But he is not contented with stating these principles generally, he goes closer and more satisfactorily to work; he furnishes specific plans of workings for the three different sorts of seams—flat seams, seams much inclined, and seams altogether vertical—and shows that in each case the carbonated hydrogen may always ascend, activity being given to the current by steam, and the coal excavated without trap-doors or brattices. This is valuable, and, I think, solid, information. It is true, the Belgian mines are all conducted on the Shropshire, or long-wall method, by supporting the work behind the hewer; but I do not think that this will make any difference as to the applicability of the principles of M. Gonot, and, in fact, I have seen a plan for conducting the workings in a manner somewhat similar to that, of late introduced by Mr. Nicholas Wood into Springwell Colliery, in the county of Durham, where there are no trap-doors or brattices. The current was to be directed and changed by stoppings.

Having passed a strong eulogium on the work of M. Gonot, I may with the more freedom criticise his formula for ascertaining the velocity of the current. Besides other objections (part of which by implication he allows himself), it is founded on the erroneous base, that the rule laid down by M. D'Aubuisson, in the case where air is forced, may be applied where air is aspirated—an error which is copied from M. Combes. All experiments and observations denote the contrary. It has never been observed in a mine that the velocity of the current is affected by the length of the course, if the aspirating power is a furnace or an air-pump; and in experiments made with vacuum pipes above ground, the length of pipe is found to cause no resistance, whereas M. Gonot lays down, that the velocity of the current in a mine is in the inversed ratio of the square root of the length of the course.

3. The next memoir is by M. Bischoff, professor of chemistry at Bonn. It is very long and laboured, containing a mass of facts and observations, many of which have been made by the author himself, and which will furnish useful materials for reflection, particularly to those who occupy themselves with the qualities of the gases disengaged in mines, and the properties of the safety lamp.

4. The fourth is by M. Lamielle, of Namur. What is new in it is principally the description of a safety furnace, made on the principle of the safety lamp. It is a furnace fed with coke, and surrounded with wire gauze, which may be lowered down a pit.

5. The fifth memoir is by M. Mottu, of Marchiennes au Pont. It has for its object, to recommend as a mechanical means of extracting air what he calls an Archimedes screw. It is precisely the same as the screw in the *Archimedes* steamer. The memoir proposes to propel air with it, but, when I saw it, it aspirated the air. This memoir excited at first much attention, from the confident assertion of the author, supported by calculations and experiments, that the quantity of force utilised was much greater than in the case of the common air-pump. But experiments, made by order of the Government, subsequent to the publication of the memoir, have shown that such is not the fact; nevertheless, as its cost is small, and it occupies little space, I conceive there may be situations where it would be useful, and, therefore, send you a drawing of it.

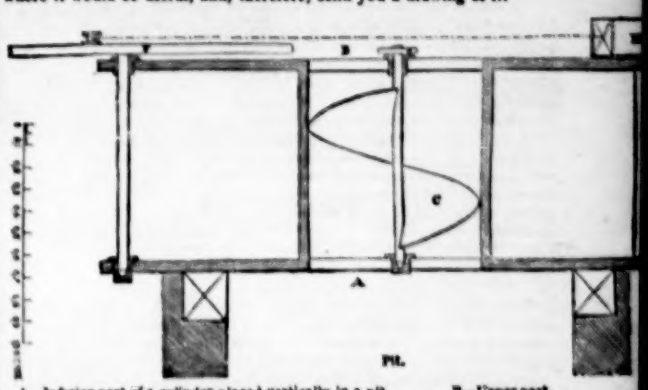
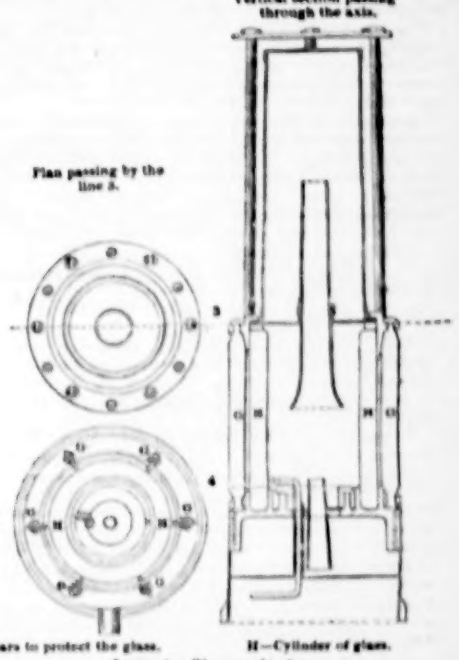


FIG.

A—Inferior part of a cylinder placed vertically in a pit. B—Upper part.
C—Screw. D—Pulley of screw.
E—Seat of steam engine.
F—Fly-wheel of engine, furnished with a band, which works on the pulley B.

The Appendix of the *Report of the Commission on Safety Lamps* is interesting. It presents a new safety lamp—that of M. Mueseler—which the Commission consider as uniting in a higher degree than any hitherto tried, the essential qualities of a good safety lamp. In this lamp the air enters not at the bottom, but near the top, and then passes a second time through wire gauze placed transversely. The Commission state, that the effect of this arrangement is, when the air is particularly explosive, to give an extraordinary activity to the flame, which of itself alters the quality of the entering air, by mixing with it a part of the burned gases, so that not only deflagration is prevented, but the parts of the air in ignition in the lamp are extinguished. I send you also a drawing of this lamp.

Vertical section passing through the axis.



G—Six bars to protect the glass. H—Cylinder of glass.

I remain, Sir, your's, &c.,

London, April 6. ——— A CONSTANT READER.

ON MINE SURVEYING.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Your correspondent, "John Budge," appears determined not to "budge" from the ground upon which he has taken his stand, in reference to mine surveying. When, however, a person is compelled, in support of his own arguments, to give replies to his own questions, it certainly would seem to imply a want of tact in the management of a correspondence of this nature, which I am inclined to think he has discovered, by the plain and simple retort his egotism has brought upon him by the letter in your Journal of the 3d inst., signed "R. Tregashis," who I know to be a practical man, and fully as capable of understanding the question as "John Budge" can possibly be.

It appears to me that a good deal of time has been thrown away, and a considerable portion of your Journal has been needlessly occupied in discussing questions not at all relevant to the matter, and more particularly in reference to correct work being performed with incorrect instruments.

"John Budge" treats the miner's dial and chain as useless lumber, and as things that should never be used for mining purposes in the way they have been called into practice by the Captain Rillies, and the Captain Joes, and all the captain noodles of the last century; and, if we are to believe his statements, all those who have used them for underground dialling, are as ignorant of the subject as he would lead us to believe the dial to be unfitted to it, and that neither the one nor the other can, in the least degree, be relied upon.

Is "John Budge" aware of the fact, that the very mode he has adopted to deprecate the use of the one, and to lower the abilities of the other, is the strongest proof he could bring forward to prove the very opposite fact that he would wish should be deduced from it? If it be true that the dial is such a very imperfect instrument, how are we to account for the perfection of the work that has been performed under its use? And if in addition to the imperfection of the instrument we add, that it has been used by a parcel of blunder-headed noodles, how are we to account for the accuracy of the results? Does "John Budge" intend to say that, because blunders may have been committed by the use of the dial and chain, that they should, therefore, be discarded altogether? Is he prepared to prove that no blunders have ever been made in the use of logarithms? He has named one instance of an error committed in a mine in Gwennap; and I have no doubt that if he were to go through the mining district of the county, and make inquiry, he would find out many more—and what of that? Is there anything so wonderful in it, that it is to be held up to the scorn and ridicule of the world, because it proves that there is not always perfection to be found in the means made use of? But let him also make inquiries on the other side of the question, and honestly acknowledge the work that has been performed by the use of the dial in the hands of those Joe noodles, and the instances of accuracy, when compared with those of error, would be so great, as at once to disprove all that he has said against the use of the miner's dial. "Facts are stubborn things," and he who attempts to write against them undertakes a task. I will name one more fact for his consideration.

It is well known—at least by those who are conversant with mining matters, and "John Budge" is not ignorant of it—that the greater portion of the agents of mines are men who have had very little education, but who have been brought up and employed in the mines from their youth—in fact, I may say, that there are very few of them who know anything of mathematics; and yet this is the class of persons who are principally called upon to use this very imperfect instrument, upon occasions of the greatest importance—and they do use it with the greatest accuracy; indeed, with this instrument those persons will commence a new shaft from the surface, and they will also carry on the operations underground,

by sinking under and rising above the different levels, at ten, or even twenty different points, with so much accuracy, that one perfect shaft shall be thus formed from top to bottom, as correctly as if it had been sunk all the way from the surface. If any doubt was felt by any individual as to the use of the miner's dial, this fact would be sufficient to remove it; and yet there are thousands of instances to be met with equally convincing, and any error that can be pointed out can only be deemed an exception from the general rule of correctness.

"John Budge" is, of course, at perfect liberty to advocate any views he may entertain upon this or any other subject, and also endeavour to prove that they are correct ones—of this no one can complain; but I would recommend his doing so without having recourse to such a mode of argument as would seem to imply that he must be right, and all others must be wrong—a mode which, as applied to this question, is calculated to reflect upon the knowledge and ability possessed by a respectable and intelligent set of individuals—the agents of mines—and to make it appear that they do not possess the necessary qualifications for conducting their own business, which, coming from him who has been brought up with them, seems somewhat strange, and cannot be accounted for upon the principle of giving to every one his due. I remain, Sir, your's, &c.,

London, April 6. AN OLD-FASHIONED DIALLER.

ON MINE SURVEYING.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—Your correspondent, Captain Budge, is able to spin a long yarn, and, if I am not mistaken, was able to do so long before he undertook to survey mines or write a book. I think it very ungrateful of him to allow that intelligent and respectable mine agent, Captain R. Malachy, to be supposed as the "Captain Bob" he alluded to in his forty years' ago tale, when it is well known that, but for his knowing the same "Captain Bob," he would have remained ignorant of mine surveying, and unable to write a book, except it was about the weight and strength of a capstan rope. Again, his going back forty years for a proof of the inefficiency of the old system of dialling, shows a bad case; he might as well have gone back to the year 1778, when Pryce wrote his *Mineralogia Cornubiensis*. Pryce says—"The instruments used for dialling are a compass, without a gnomon or style, but a centre pin projecting from the middle of the compass to loop a line to, or stick a candle upon, fixed in a box exactly true and level with its surface, about six, eight, or nine inches square, nicely glazed with strong white glass, and a cover suitable to it hung square and level with the upper part of the instrument; a 24-inch guage, or 2-foot rule, and a string or small cord, with a plummet at the end of it, a little stool to place the dial horizontally, and pegs and pins of wood, a piece of chalk, and pen, ink, and paper."

That time is gone by as well as the forty years' ago tale, but the traversing on the surface with the "same dial and chain" will never be done away with as long as mining exists, although it may not be had recourse to, but on very important occasions, or to prove the work of a parlour miner.

I will at some future time (with your permission) state more fully my opinion of the safest and easiest way of mine surveying. Before I conclude I wish to say a word or two to your Halkin Mountain correspondent. If I am correctly informed, the person that "sailed for Carnarvon without a register" was never a "Cornish captain," but a plain, honest, Cornish miner, quite undeserving of the attack made on him; but, as "Cambrian" has already been pretty well handled by your Breage and Holywell correspondents, I shall leave him to his own reflections.

I remain, Sir, your's, &c.,

April 8. MWYNWR.

ON MINE SURVEYING.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—After the full exposure and proofs of the badness of the old mode of dialling which has lately been given in the Journal, will not all thinking and unprejudiced persons be assured that the man who still persists in defending that contemptible practice is a real enemy both to miners and mining?

I passed over the first letter of R. Tregaskis, of Perran, in respect to his age and prejudices, but, as he has been emboldened to write again, in a most presumptuous, scurrilous, and erroneous manner, I feel myself imperatively called on to reply. This person's arguments (if they may be so called) in favour of the old method have been refuted over and over again in former letters, but we will just sift his conclusions as briefly as possible. He says—"If the last peg of the first series answers to that of the second series the work is right." How dare he put forth such an assertion? How possible is it that a uniformity of error, of great extent, may occasion such a result? But, further, is not he, and all tracing diallers, fully conscious that it is a hundred to one against him that the terminating pegs will not fall together?

It may be quite relevant here to observe, that it seldom happens when the surface will answer for diallers to trace their underground work immediately vertical, or directly over head, consequently they have to go at a distance for a level field, and, in that case, after all they can do, they can only obtain a guess line of the final course and distance, and, even then, they have to bring, or transfer, this long and naked line to its required place, utterly destitute of the admirable check of the cardinal corresponding distances which the trigonometrical system furnishes, so that they are exposed to error upon error.

This correspondent says that "the new version of the Gwennap story is scratched into my memory with the point of a diamond!" I really do not understand this. Surely, all who have taken the trouble to read the letters, must know that the reply of Mr. Tregaskis was a most complete confirmation of my account of the Gwennap pegging match; and, so notorious were the facts that, after a lapse of forty years, he could at once identify and expose the very mine, shaft, and pair, when only the parish was mentioned! But when our learned Perran scribe tries to write against the true system of mine surveying, he lets out some strange sentiments indeed. No less than three times does he mention the "operations of the mind," and states, in the pure old Cornish positive case—"every operation of the mind is subject to error!" What can we make of this, Mr. Editor? Must we conclude that the old diallers have no mind, or only that they have a mind which cannot, or must not, be operated upon? This is, indeed, something for the curious to construe. But, lastly, my brother Cornishman says, in effect, that "the tracing and pegging a crooked level is all straightforward!!" Is not this, Sir, as neat a little bit of Irishism as you ever met with in all your visits to happy Hibernia?

I remain, Sir, yours, &c.,

Callington, April 6. JOHN BUDGE.

SLAVERY IN THE ANGLO-BRAZILIAN MINES.

TO THE EDITOR OF THE MORNING POST.

SIR,—As a shareholder of a Brazilian mining company which has of late been chosen for a target by a party whose well-meant intentions cannot be mistaken, I can but declare that I shall most willingly join the disinterested proposals of those of my brother shareholders, who have only of late discovered that the produce of our mine was always raised by slave labour, provided the principle is arrived at which will make it a rule for none of our countrymen to hold slaves either in Brazil or elsewhere; and shall, therefore, be glad at our next half-yearly meeting to see a proposal made which may lead to such an end. Nor do I think it right to doubt of a disposition in the several other Brazilian mining companies to co-operate towards so great an object; for I suspect that, if there exists a different degree of culpability amongst the sister companies, ours is not the most culpable, as it bought no blacks since 1824, while all others bought their blacks after the conclusion of the slave trade by treaty, and some, as is said by the *Mining Journal*, even such as have been acknowledgedly imported in contravention of the Brazilian law of November, 1831, which declares all negroes thus imported free.

I therefore say again, that, if all the sister companies will sincerely co-operate, I am most willing to make the sacrifice required, which, upon the whole, will be but small, for, persuaded that our negroes have been treated well, I am not apprehensive that we should lose their services entirely even were we to free them at once, and not by a term of apprenticeship, a measure I am inclined to resist, not for the sake of and from interested views, but on account of the evil springing therefrom to the Africans themselves.

Should my proposals be well received I shall not object to coming forward at an early opportunity, though, unlike some of my brethren, I am sorry to say I cannot make out my ignorance of having been a slaveholder while I unquestionably was

A SHAREHOLDER IN THE IMPERIAL BRAZILIAN MINE.

MINERAL WEALTH OF PENNSYLVANIA.

[FROM A CORRESPONDENT.]

As so many of our countrymen are interested in Pennsylvania loans, and so much unfounded apprehension has been excited as to the safety of these investments, probably by interested parties, I send you an extract from Governor Porter's message of the 6th of January last, touching upon the progress of iron manufacturers in that flourishing scion from the British stock. We ought, as having a deep stake in her prosperity, to wish for the extension of these developments, for as the money borrowed has all been expended upon her railroads and canals, we are rendered more more secure in receiving our dividends punctually, if a brisk trade is kept up. Nor ought we to entertain any jealousy of the increase of her manufacture of so bulky an article as iron; for if, by saving the duty levied on foreign imports, it can be afforded at a cheap rate on the spot, it will be applied to so many new uses, as not only not to interfere with our exports, but to call for greater supplies of railroad iron, which they admit duty free. Among these new uses (from which they are now only debarred by the high price of the imported article), are iron boats on their three to four thousand miles of canals, and especially for steam-boats on the Ohio and Mississippi, where the "snags," "planters," and "sawyers," annually demolish scores of the slightly-built wooden steamers, but which recent experience has proved to be innocuous against the iron ribs and coats of mail of the two boats recently built at Pittsburgh.—"Our commonwealth (remarks the Governor) possesses a fertile soil and unbounded agricultural and mineral wealth. The variety and extent of our water-power give great facilities to the manufacture of our grain into bread stuff, and for every other branch of manufacture, either needed for the supply of our citizens, or the employment of their capital. Had Pennsylvania already reached the full development of her resources with her present pecuniary responsibilities weighing her down, we might well contemplate our situation with trembling solicitude. But this is not the case; throughout the whole extent of her ample territory, there is scarcely a square mile which does not abound in some or all of the great staples of her mineral wealth; anthracite and bituminous coal, iron, marble, and limestone have been scattered by Nature with a most profuse hand, and have been hitherto worked barely enough to prove with what prodigality they have been lavished upon us. The coal-field of our commonwealth embraces more than one-fifth of its area, and more than three times as much as belongs to entire Europe. Connected with the coal which abounds in so large a portion of the commonwealth, we have large supplies of iron ore almost in immediate contact with it. In addition thereto we have, within convenient distances, almost all the other varieties of iron ore found in any part of the world. The adaptation of anthracite coal to the smelting of iron ore has been followed by its successful and profitable application in the further stages of the manufacture of the metal, and that the same results will speedily follow from the application of bituminous coal may be looked for with almost absolute certainty. While the iron manufactured with charcoal will always be wanted for the finer purposes, and the demand for it increased by the natural increase of the population of the country, that manufactured from mineral coal, will be employed in the construction of railroads, and for innumerable other purposes. This discovery must stand as a distinguished era in the annals of our commonwealth. It cannot fail to add millions of dollars to her active and available capital, and will ere long transfer to our own citizens most, if not all, of the large sums that are now annually sent abroad for railroad iron, and other iron manufactured articles. The manufacture of these numerous and valuable commodities will not only result in enriching Pennsylvania, but will cut off a large item in the imports of this country, tend to emancipate us from European dependence, enable our sister States to complete their railroads at a cheaper and better rate, and strengthen the national union by the strongest of all ties—that of mutual interest. Nor is there in Pennsylvania a single class of citizens who will not share directly in the advantages. The owners of coal and iron deposits, and those who engage in the manufacture and sale of these productions, will derive the first benefit; but the farmer, the mechanic, the merchant, and every other citizen will feel immediately the salutary impulse which will be communicated to his own peculiar business. The value of our canals and railroads must be greatly enhanced, as well as that of all other species of property. With the cheap and ready means which they will afford for the transportation of our various products and manufactures, there can be no doubt that the trade and business of the State must extend and increase with unexampled rapidity, and, by prudence and good management, be perpetuated. In this gradual and certain development of our resources, may be found abundant means to liquidate our public debt, and to discharge every other liability that can be justly cast upon the State. I confess it affords me peculiar gratification to advert to this topic, for it shows most satisfactorily that though this commonwealth has been somewhat in advance of the time in extending her improvement system so widely as she has done, the people, notwithstanding, are destined, at no remote period, to realise most amply all the benefits it was ever expected to produce."

[ADVERTISEMENT.]

BRITISH IRON COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The note which you appended to my letter, in your last Journal, is calculated to injure me in the opinion of others, who are looking to the steps which I am taking to defend myself against the attack of Mr. Larpent, and as I feel quite sure that you will never compromise the integrity of your Journal, by refusing to do justice where injury has been inflicted by the "silent system," I hope you will allow me to make the following remarks in your next publication:—

You say—"We regret that many questions of an important nature are too frequently lost sight of by personalities being indulged in; and, in the present instance, we feel that the real question at issue may be merged or forgotten in the consideration of attack and defence of personal character." As regards the case between Mr. Larpent and myself, the real question at issue was neither merged nor forgotten, but made conspicuous throughout my letter, addressed to that gentleman, not in the character of a private individual, but as chairman of the British Iron Company—the question being, the wrong done to the shareholders by means of the "silent system." I was, therefore, more surprised that you did not do me the justice I solicited, by giving insertion to my letter, especially when I found that the British Iron Company was placed in the leading article of the same Journal, as the most gigantic example of the ruinous effect hitherto exhibited of that very "silent system."

Again, you observe—"We have too high an opinion of Mr. Larpent, and the position he holds in society, to suppose that he would avoid entering into the general charge, and merely amuse or divert his auditory by a personal attack on Mr. Cort (which is the ground Mr. C. assumes)." But had your reporter not been excluded, like myself, from the special general meeting on the [illegible] February last, you would have recorded, in the words of your own agent, instead of the words of "A Shareholder," who was present, that Mr. Larpent did amuse and divert his auditory, exactly in the way which you think he was incapable of doing, not merely by a personal attack on myself, but a personal attack on the respectability of the whole of the requisitionists, although representing nearly [illegible] in the company, including a banker at the west end of the town, and others quite as wealthy and respectable as himself. Why such an attack was then and there so made cannot be explained, unless it were to deter the shareholders assembled from placing any confidence in the case proposed to be referred for the opinion of some eminent counsel, relative to charges of fraud practised by some of the agents of the company, which it might have been deemed inexpedient to expose more generally to the shareholders.

If the chairman did not avoid entering into the general charge, he can point out which of the charges he did not avoid, or did go into—whether the parties accused attempted to disprove any one of them—or whether, in fact, the whole of the parties did not prefer subscribing to the "silent system." The high opinion which you entertain of the chairman of the British Iron Company, and the position he holds in society, may be well founded; but I ask, is it consistent with such high opinion, or creditable to the position to which you allude, for the chairman of the British Iron Company, with doors closed against yourself and the press generally, to poison the minds of nearly [illegible] shareholders assembled, with a belief in the dishonour of an absent opponent, while he held in his own hands, in print, the strongest possible evidence that the late chairman (his own partner), Mr. Horsley Palmer, sitting by his side, had only a few weeks before borne honourable testimony to the moral character and integrity of that very opponent? Such conduct, I am confident, does not come within the scope of the "high opinion" to which you refer. Yet the chairman did so conduct himself at the special general meeting on the [illegible] February last, to the great injury of myself, and for which I will hold him amenable in a court of justice, if any of the shareholders present will furnish me, in writing, with the words he uttered to my prejudice.

In conclusion, you remark—"The letter, we think, might have been written in a more cool and temperate manner, for it appears to us the style itself precludes the chance of reply." Now, Mr. Editor, had this opinion been appended to the letter itself, and you had given both in your columns, it would have been, with every deference to yourself, more fair to my credit, as your readers might then have decided whether there was a single word not justified by the injury which had been inflicted by a highly influential authority behind my back. And, as regards the style precluding the chance of reply, you have occasionally yourself not minced the matter, on similar occasions, especially with reference to the Tamaro "silent system," which is not one-twentieth part so ruinous in effect, or so reprehensible in character, as the case of the British Iron Company. Instead, therefore, of the style precluding the chance of a reply, the charges contained in my letter are much too serious not to have commanded immediate public attention, had justice to myself, and not defamation of character, been the real object of this most foul and cowardly attack. For these reasons, I again rely on your justice for the insertion of my letter, if only to prove to your readers, that those who advocate and practise the "silent system" never can expect encouragement, much less countenance, in the *Mining Journal*. I am, Sir, your's, &c.,

London, April 8. RICHARD CORT.

ON THE RESOURCES AND APPLICATION OF COAL.

[The following lecture was delivered at the Pontypool Mechanics' Institute, by Mr. W. Llewellyn, mining engineer, and one of the secretaries of the institution.]

GEOLOGY—SECT. COAL.

On a former occasion the lecturer had explained the various theories and recent discoveries of geology and geologists, and now confined himself to the formation, nature, peculiarity, and history of coal, and the strata or measures connected with the coal basin. Science we look upon to belong not to localities alone, but to the world, and through the ubiquity conceded to the Press we are enabled to pick up morsels for our readers almost everywhere. Mr. Llewellyn said that in the earliest period of geological science geologists were taunted as irreligious and disbelieving persons, and the science itself as tending to overthrow all religion; but now, as the discoveries in geology are gradually made so have the objections fallen away, till geology is now almost universally believed in; it is a science much calculated to fill the mind, at the same time with pleasure in examining the various compositions of the different strata that come under the notice of the student, with wonder and awe at the vast size and beautiful arrangement of those strata, and, above all, with admiration of the Great Disposer and Creator of them—as astronomy teaches us how "the heavens declare the glory of God," so does geology convince us that "the earth showeth His handy work." It is proved by geologists that the world existed long before the account of the creation of light given by Moses, in the Bible; and in all the discoveries of geologists not one has been made tending in the least degree to contradict that most sacred truth, that "in the beginning God created the heaven and the earth."

THE STRUCTURE OF THE EARTH.

The crust of the earth is divided into two classes of rocks—viz., the unstratified and stratified, the former being of igneous, and the latter of aqueous origin. Of the former class there is no manner of telling the age, but when they enter into a stratified mass, in veins, it is certain that these veins have been formed since the strata in which they are formed, since it is evident they have entered therein in a liquid state. Of the latter class the lowest are subdivided into the following divisions, or, as they are termed by geologists, formations—viz., the primary transition, secondary, and tertiary formations—of these the lowest or primary have peculiarities not to be met with in other strata, for instance, they contain no fossils, and are of a crystalline structure; they were deposited prior to animal or vegetable existence, and hence derive the name of primary. The secondary differs from the primary in containing many fossils. The lower strata of this formation very much resemble the primary, and are called transition rocks, from the supposition that they were deposited at a period when the earth was passing into a state fit to receive animal and vegetable life on its surface; many fossils of kinds now extinct are found in this formation, and it is to this formation that the *coal measures* belong. The higher strata of the secondary formation are called tertiary, and contain many fossils similar to kinds now existing. Some fossils in this formation are immensely large; a kind of lizard has been found in it of the enormous length of 100 feet. The unstratified rocks are so disposed as to form immense basins in their hollows, so that by this wise arrangement of Divine Providence we are able to get at all the strata, as they crop out and cover different parts of a district.

Coal is the most valuable of minerals, especially as used for the steam-engine. The lecturer stated that he was disposed to believe that the use of coal was known to the Ancient Britons, although history is silent on the subject, its present appellation being a British and not a Saxon word. In corroboration of this view, it is stated in *Pennant's Tour in Wales*, that a flint axe, which undoubtedly belonged to the Ancient Briton, was discovered stuck in the crop of a stratum of coal at Craigy Lark, in the county of Merioneth. In the year 852 there is undoubted evidence of its properties being known, for in this year the abbey of Peterborough granted lands under the reservation of certain payments to the monastery, amongst which are fifty cart loads of wood and twelve of pit-coal. The first public notice of coal is stated by Hume to have been in the reign of Henry III., who, in the year 1272 granted a charter to Newcastle, giving the inhabitants a license to work the mineral. In the year 1306 we find Edward I. prohibiting the use of coal in London, in consequence of the offensiveness of the smell. Coal was not brought into general use until the reign of Charles I., and it was then introduced in consequence of the great decay of wood fuel, and its adoption was an affair not of choice but of stern necessity; for Stowe says in his *Annals*, which were written about the year 1630, that in his time the "nice dames of London would not come into any house or room where coal was burned, nor willingly eat of the meat that was either sod or roasted with coal." During the reign of Charles I., in consequence of the scarcity of wood, which was then severely felt, many persons engaged in the iron manufacture had endeavoured to smelt iron with coal, but their efforts were long unsuccessful. The first who appears to have succeeded in so doing was a gentleman of the name of Dudley, who lived during the Civil Wars. In a work which he published, called *Metallum Martis*, he gives a full and interesting account of his experiments for the smelting of iron with pit-coal. Like many other geniuses and benefactors of their kind, Dudley was exposed to discouragements and persecutions of no ordinary kind. His works were completely destroyed by an ignorant mob, and in his efforts to introduce and perfect that process, to which this country owes so much of her wealth, her power, and her prosperity, he was nearly ruined, and, indeed, ultimately consigned to a jail; nor was it generally adopted until about a century afterwards. Wood was, notwithstanding, almost entirely used until the early part of the last century, and at that period the iron trade seemed dwindling into utter insignificance. It will, perhaps, be hardly credited, that, even at this comparatively recent period, the means employed in making iron were of the rudest kind. The furnaces were exceedingly small, making no more than from fifteen to twenty tons of iron per week each, and were supplied with air from a bellows, worked by horses, oxen, or even human labour. About this time, however, coal again became an object of general consideration for smelting purposes, and the steam-engine being employed in working the blowing machinery, and thus increasing the column of blast necessary to produce combustion, the process was attended with complete success, and was universally adopted in the year 1740, or exactly 100 years ago, the first person who used it with success being Mr. Abraham Darby, of Coalbrook Dale Ironworks. The total quantity of iron manufactured in Great Britain in that year, was only 17,350 tons; there were then but four furnaces in the counties of Monmouth and Glamorgan (two in each county), they made in that year 1300 tons of iron. This was the state of things in 1840, and it may not be uninteresting to contrast it with the present prosperous condition of the iron trade. In 1836 the iron manufactured in South Wales alone amounted to the enormous quantity of 354,919 tons, or more than twenty times as much as was manufactured in the whole of Great Britain ninety six years before that period. The South Wales coal basin is very rich in iron ore, but till very lately the western part only could be worked, as the coal in other parts of the basin was not fit for smelting purposes; but now, in consequence of a very valuable discovery made by a Welsh iron master (George Crane, Esq., Yniscedwin) the whole of the basin is worked; but to describe this discovery, it will be, perhaps, necessary to describe the manner of making iron. Iron ore is carbonate of iron. The first process that it undergoes is that called "roasting," to drive off the carbonic acid gas; it is then put into the furnace with lime; the use of lime is this—It unites itself with the earthy matter, and being lighter than the iron it rises to the surface; now, if coal be used in smelting it makes the iron brittle—it becomes, consequently, necessary to take away the sulphur from the coal, which is performed by a process called "coking." Coke is nearly pure carbon, but still it is not so pure as charcoal. Now, the discovery is this—stone coal is also nearly pure carbon, and can be employed instead of coke; this coal was so difficult to ignite that no iron but at the western part of the basin could be worked till Mr. Crane applied his discovery, by uniting it with hot air (technically called "hot-blast"), so that now all the iron can be worked.

Coal is divided into four divisions—viz., *cubical coal*, so called as it comes out of the mine in cubes; *slate coal*, which very readily splits, but will not readily break across; *cannel coal*, which breaks in square columns, and burns like a candle; and *stone coal, or anthracite*. These are subdivided into a very great number of different kinds, according to the component parts of each.

ANALYSES OF COAL IN THE SOUTH WALES BASIN.

	Coal Veins.	Bitumen.	Carbon.	Ashes.
Mynyddislwyn	Vein, red ash coal (per ct.)	37	58½	4½
Cwmtillery	At Abercarne (Hopkins' discovery)	25½	64½	10
Pontypool	Rock vein	28½	69	3½
Ditto	Meadow vein	29½	67½	3
Abersychan	Rock vein	26	69	5
Ditto	Meadow vein	29½	66	4½
Varteg	Droeding vein	32½	63½	3½
Ditto	Meadow vein	34½	60½	5½
Nantyglo	Elled vein	17½	81½	1
Ditto	Droeding vein	17½	77½	5
Tredegar	Big vein	19½	80½	3
Ditto	Yard vein	15½	81½	3½
Dowlais	Big vein	14½	81	3
Ditto	Upper four feet vein	13½	85	1½
Cyfarthfa	Pit coal	6	89½	1½
Ditto	Upper yard vein	11½	85½	3
Hirwain	Gellilwyn vein	9	89½	1½
Ditto	Six feet vein	9	88	3
	STONE COAL.			
Ynisceedwin	Big vein	7	89	4
Ditto	Brass vein	7	89	4

These results show how various are the proportions of the matters entering into the composition of coal from the same coal-field, and also give an analysis of veins at nearly all the iron works in the northern cross of the basin, exhibiting the gradual transition from the highly bituminous to the anthra-

cite quality. Thus we see that coal is compounded of carbon, bitumen, and ashes. Carbon is an elementary body, but bitumen is not. Bitumen is compounded of oxygen and hydrogen, so that the coal that has the greatest quantity of bitumen contains the most gas, such as is used for the purpose of light. Coal, with the shale limestone alternating with it, is called the "coal measure," the place of which is above three formations, lying on the old red sandstone, but sometimes it lies on the transition limestone, and even sometimes on granite. But still the order is preserved—thus, they never lie above the new, nor beneath the old, red sandstone, so that, if they lie on the granite, as the old red sandstone and transition limestone cannot lie above them, these strata are found entirely wanting. The coal runs in veins, from the thickness of a few inches to several feet; it exists in Staffordshire even to the extent of thirty feet. These veins do not run horizontally, but are more or less inclined to the horizon, the angle of inclination generally being from 3 deg. to 11 deg.; but in practice, the "dip," as this inclination is called, is not reckoned by degrees, but by the number of inches falling perpendicularly in a foot or yard, or any other distance, horizontally. All the veins run parallel to each other, and, as they lie in the form of a basin, there are some parts where they make their appearance at the surface—this is called the "outcrop" of the vein. The South Wales coal-field consists of two basins, the centre of the original basin having been elevated almost to a level with the outcrop, so as to form very nearly two perfect basins. Thus is the coal brought near enough, at all parts of the basin, for working. Did it lie in one large basin the centre would be so very far from the surface as not to pay the expense of working. The coal basins are never perfectly level, but are thrown about in all possible directions by what are called "faults," which throw the veins entirely out of their course, from the distance of a few inches to many feet. These "faults" are water tight, and, sometimes by stopping the flow of water down the coal, causes it to ascend to the surface, and there form springs; they also keep the pit below them quite dry, while that below them is completely under water. There is a law for calculating whether the strata are thrown upwards or downwards by the "fault." It is this—If the "fault" is inclined towards the floor of the level, at an obtuse angle, it is thrown downwards; but, if it be a right angle, there is no certain manner of telling which way it is thrown.

ORIGIN OF COAL.

Coal is of vegetable origin; in proof of which, marks of various kinds of fern, &c. have been found in it. By the aid of the microscope a net like texture has been observed in fossil wood; and the same may be seen in coal. Hatchet produced proofs of its vegetable origin, and also produced artificial coal. Fossil ferns, &c., are discovered near coal, in the strata alternating with it. The fossils of the coal measures are all vegetable; there have been 300 different fossils discovered in them, of which two thirds are different species of ferns. The next question, as to the origin of coal, is how so vast a quantity of vegetable matter was accumulated. There have been many very different opinions held relative to this question. Deluc and others say that the trees, &c., grew there, and were on the same spot converted into coal. But this opinion is encumbered with many difficulties, for the forests must have been first sunk below the sea—again raised—a fresh forest must grow—it must again have been sunk and risen for every vein of coal in the measure. Buckland, Lyell, and others, say that the forests have been swept away by water, and buried beneath the mud and other deposits at the bottom, which seems by far the most probable theory. Coal is forming at the present day. Some people formerly thought that coal was to be met with everywhere, and much money has been wasted in the search for it. Now, a slight acquaintance with geology would show the absurdity of such an opinion; and a good geological map would have shown where the coal really does lie. The principal coal fields in England are the Northumberland, Yorkshire, and Durham, Lancashire, South Stafford, Shropshire, Forest of Dean, two Somersetshire fields (forming one), and the South Wales coalfields. In Scotland there are most immense "faults;" there are also many in Ireland.

PROBABLE DURATION OF COAL.

As the manufactories of England depend entirely on coal, and as it is her manufactories that give England the superiority over other nations, it must be a question of immense importance how long this cause of her superiority will last. The coal annually used in Great Britain amounts to millions of tons, yet Taylor reckons, at this immense annual consumption, there is coal sufficient in the Newcastle basin alone to supply these demands for 700 years. Buckland reckons for 400 years; but this is certainly too low. In all her coal-fields there is enough to last England for 2400 years, without reckoning those fields which are nearly exhausted; so that for 2400 years there is a competent supply, besides the immense beds now forming.

PROCEEDINGS OF SCIENTIFIC BODIES.

GEOLOGICAL SOCIETY.

FEB. 3.—The Rev. Professor BUCKLAND (President) in the chair.

A paper by Mr. HOPKINS, on the Geological Structure of the Wealden District and the Bas Boulonnais, was read.

In this memoir Mr. Hopkins first describes the phenomena of elevation presented in the English and French districts, and, secondly, he compares the laws of the existing phenomena with the results given by the theory of elevation put forth by him in a previous memoir, published in the *Cambridge Transactions*. With respect to the first division of his subject, Mr. Hopkins shows that the Wealden district and the Bas Boulonnais compose parts of a regular oval, but curved or inclined towards the south-east, in its eastern portion. The lines of elevation in the Weald are partly marked by an anticlinal arrangement of the beds, and partly by strong flexures, forming one side of a saddle. Of these lines nine are described. The first, or Hastings line, extends from a point to the north-east of Hastings, towards Battle; the second, a strongly-marked anticlinal, ranges along the high ridge of Brightling Down to Heathfield-park; the third, or Wadhurst line, passes eastward from Wadhurst to Hawkhurst, to the south-west of which it is lost; but it may be followed westerly along the ridge between Wadhurst and Mark Cross; the fourth line is the great central ridge of the district, and is named by the author the Crowborough, from the beacon which stands upon it: the line is continued westerly to the north of Balcombe, but it is not traceable beyond Horsham; the fifth, or Cuckfield line, which ranges parallel with the Crowborough, is not visible far to the north of Cuckfield, but to the east of that town it is continued across the Brighton Railway; the sixth, or Frant line, is distinctly marked at Lamberhurst, whence it proceeds westward along the Frant hill, but it is apparently lost not far to the west of Frant; the seventh, or Brenchley and Bidborough line, is marked by a strong flexure of the beds in Brenchley-hill and Bidborough-hill, south of Tunbridge, and it is continued westwards, though less distinctly, across the Medway. All these lines preserve a remarkable parallelism with each other, and with the curved central axis of the district; the eighth, or Greenhurst line, first described by Mr. Martin, Mr. Hopkins says, is distinctly marked from a point south-west of Pulborough, whence it ranges parallel to the chalk escarpment till it enters the chalk at Piecomb; further eastward it is strongly marked at Lewes, but its strike westward from Pulborough, he states, is not very distinct. The ninth line is traceable from Farnham to Seven Oaks, parallel to the chalk escarpment of the North Downs. It is not throughout a true anticlinal, presenting, for the greater part, only one range of dip. Towards the west it passes immediately at the foot of the Hog's Back, and the hill on which stands Margaret's Chapel, near Guildford. To the east it strikes south of Dorking and Reigate to the summit of Tilburstow-hill, and by Linksfield to the east of Seven Oaks, as formerly described by Dr. Fitton. Between the two last places it is sometimes a distinct anticlinal line. Mr. Hopkins also describes several transverse valleys in the central portion of the Wealden district—and he states the evidence on which he believes them to have originated in transverse dislocations. He notices also those near the south-west boundary of the district, which are nearly perpendicular to the Greenhurst line, likewise those in the green sand ridge along the northern flank of the Wealden in the Seven Oaks district. He further describes what he conceives to be incipient valleys of elevation, due to transverse fractures—noticing more especially those in Leith-hill and the ridge near Seven Oaks. Mr. Hopkins likewise draws particular attention to the transverse river courses through the chalk escarpment; and he states that their analogy to the transverse valleys in the green sand ridges leave no doubt of their being referrible to the same physical cause, though the chalk itself, from its great uniformity of structure, affords but little evidence of dislocation. With respect to the phenomena of the Bas Boulonnais, the author has recognised three parallel lines of dislocation, commencing at the coast, and ranging in a direction which coincides with that of the lines of elevation of the Weald, supposing the latter produced across the channel. The southernmost line passes immediately to the north of Boulogne.

The author commences the second part of his paper by recapitulating some fundamental points of his theory. It is assumed that an elevatory force has acted simultaneously at every point of the lower surface of the elevated mass in each district, throughout which the phenomena of elevation follow the same law. This force is not supposed to have been necessarily of uniform intensity throughout. If it has been greater in one portion of the district than in the rest, there will be a corresponding modification in the direction of the laws of elevation; or a deviation from those positions in which they would have existed had the intensity of the force been uniform throughout. If the force has been uniform, the direction of the lines of dislocations and elevations will depend on the form of the boundary of the surface of the elevated area. If this be given, then directions must be investigated on mechanical principles; and if the former be supposed to have acted with greater intensity in any assigned portion of the district, the corresponding modification in the direction of the lines must be determined. This, Mr. Hopkins has done, in some particular cases, in his memoir in the *Cambridge Transactions*. Any irregularity in the cohesive power of the elevated mass will have but little effect in the general directions of the lines of elevation; but if in any considerable continuous portion of the district the elevated crust is thinner, and, therefore, lighter and weaker, the effect will manifestly be the same as if the crust had been of uniform thickness throughout, and had been acted on in this particular portion with a force of greater intensity. In the application of this theory the boundary of the area under which the elevatory force acted simultaneously, must be determined as nearly as possible by the actual boundary of the disturbed district, throughout which a character of continuity in the phenomena of elevation is recognised. That portion of the district also in which the force apparently acted with greater intensity, must be determined by the existing indications of greater elevation. Thus it is conceived that a simultaneous effort of the elevating force was made throughout the whole tract, from the Bas Boulonnais in the east, beyond the Wiltshire chalk in the west, and from the Vale of Pusey and the Valley of the Thames on the north, beyond the southern coast of the country on the south. The Wealden district, with the Bas Boulonnais, presents also a case in which it is presumed, from its greater elevation, either that the disturbing force acted there with greater intensity, or that the elevated crust was thinner than in the other parts generally of the district. Assuming such to have been the case, Mr. Hopkins points out what would be the general direction of the lines of elevation throughout the Wealden and the Bas Boulonnais, and comparing them with the lines described in the first part of the paper, he shows the remarkable accordance which exists between the result of observation and of theory—an accordance which he considers as strongly confirmatory of his theory, as applied to this district. Hence the author concludes, that all fissures and dislocations, or lines of elevation, must have been produced by one simultaneous and momentary effort of the elevating force. It is not, however, he says, to be regarded as a necessary consequence of this conclusion, that the whole elevation of the district was thus produced at once; it might be, in some degree, produced by previous, and, in a considerable degree, by subsequent movements, but it would seem at least highly probable that that general movement which produced the dislocations of the elevated mass, and impressed upon it its present distinctive characters, should have been the most energetic of those repeated movements, to which the whole elevation was probably due.

EARTHQUAKES AT ZANTE.—(*Extract of a Letter*).—"On the 26th of February, after three days and nights of incessant rain, attended by a violent gale of wind, a most alarming shock of earthquake was felt about seven in the evening. It was not so disastrous as that of the 30th of October, but the duration was much longer, the vibration being continued from thirty to thirty-five seconds, while the former only lasted eight or nine. The consternation was general and extreme. The streets were in an instant filled with the terrified people, eager to fly, but not knowing where to seek safety. In their houses they dreaded being buried in ruins, in the streets they were drenched with rain. The churches were all filled, it being the hour of the evening prayers to the Virgin, offered up every Friday during Lent; and the cries and confusion were terrible. Only a few houses fell either in the town or the surrounding country, others were more or less shaken, and, as the shocks recur daily, we have every reason to fear that in the end the town will become a heap of ruins. After the earthquake of October 30, which destroyed nearly all the houses on the island, Zante experienced successive shocks, more or less strong, during forty days, making the number amount to no fewer than 259, and during the remainder of 1840, vibration of the earth, more or less perceptible, nearly every day. All the violent shocks were attended with dull rumbling sounds and subterranean explosions. Sometimes these noises were heard without being succeeded by any vibration, and sometimes the shocks were silent. Since 1514 Zante has experienced twenty-one earthquakes. That in 1514 divided the hill on which the fortress stood, and buried part of the ancient town in the ruins. In 1767 the shocks were repeated for three months, during which an epidemic disease prevailed. In 1791 the great shock lasted several minutes, caused immense damage, and was followed by minor shocks for six weeks. In 1820 the earthquake, which once more desolated the island, was preceded by a single flash of lightning. That of 1837 lasted with great intensity for twenty seconds; and that of 1840 was the most disastrous of all. In fine, the unfortunate island of Zante has suffered during the sixteenth century, two earthquakes; during the seventeenth, three; during the eighteenth, ten; and during the first portion of the nineteenth century, six."

METEOROLOGICAL JOURNAL, 1841.

	April	Thermometer	Barometer		April	Thermometer	Barometer
Thursd.	1	from 39 to 55	29,54 to Stat.	Monday	5	40 .. 53	29,38 .. 29,50
Friday	2	36 .. 57	29,55 .. Stat.	Tuesday	6	37 .. 54	29,56 .. 29,74
Saturd.	3	30 .. 54	29,60 .. 29,59	Wednes.	7	33 .. 54	29,78 .. 29,74
Sunday	4	37 .. 55	29,59 .. 29,46				

Edmonton. CHARLES HENRY ADAMS.

Winds, S.W. and S.E.—On the 1st, generally cloudy, a little rain fell about 2 p.m.; the 2d and two following days, generally clear; the 5th, morning cloudy, with rain, otherwise clear; the 6th, cloudy, raining frequently during the afternoon; the 7th, a general overcast, a shower of rain about 10 p.m.

Rain fallen ,355 of an inch.

FROM THE LONDON GAZETTE,

Tuesday, April 6.

INSOLVENTS.

April 5.—T. Day and T. Appleby, Cheddleton, Staffordshire, paper manufacturers.

BANKRUPTCY ENLARGED.

Edwin and Josiah Marriott, Northampton, drapers, to April 30.

BANKRUPTCY ANNULLED.

Samuel Cranfield, Colchester, innkeeper.

BANKRUPTS.

W. Cross, Mountnessing, Essex, grocer. [Turner, Mount-place, Whitechapel-road.
G. Corbett, Lewisham, Kent, builder. [Newbon and Evans, Wardrobe-court, Doctors'-commons.
S. Revell, Plymouth, linendraper. [Sole, Aldermanbury.
J. Pidgeon, Birmingham, laceman. [Reed and Shaw, Friday-street, Cheapside.
J. Dodding, Liverpool, paint manufacturer. [Hall and Co., Verulam buildings.
G. W. Popple and R. Popple, Kingston-upon-Hull, oil merchants. [Hicks and Co., Gray's Inn-square.
J. Tregaskes, Bristol, victualler. [Hudson, Bloomsbury square.
W. T. H. Phelps, Newport, Monmouthshire, coal merchant. [White and Whitmore, Bedford-row.
G. Malam, Spalding, Lincolnshire, gas manufacturer. [Bell, Bedford-row.
Eleanor Botham, Speen, Berkshire, innholder. [Parker, St. Paul's Churchyard.
R. Jefferson, Newcastle-upon-Tyne, victualler. [Swain and Co., Frederick's-place, Old Jewry.
J. Tilmarsh, Cheltenham, mercer. [Baylis, Devonshire-square.
W. Perry, Leominster, Herefordshire, maltster. [Smith, Chancery-lane.
J. Woodhouse, Huddersfield, manufacturer. [Battye and Co., Chancery-lane.
J. Nelson, Holme, Westmoreland, spirit merchant. [Mackinson and Sanders, Middle Temple.

DIVIDENDS.

April 29, H. Treasure, Reading, Berkshire, boot and shoemaker—F. G. Hoskins, Deal, tailor—A. Mackenzie, Hammond's-court, Mincing-lane, wine merchant—J. Brickwood, sen., J. Brickwood, jun., J. Rainer, W. Morgan, and J. Starkey, Lombard-street, bankers—May 1, W. H. Summers, Sackville-street, bill broker—T. J. Ashton, Pall-mall, tailor—April 27, J. Roberts, Clareton, Yorkshire, horse dealer—29, J. Wood, Barnsley, Yorkshire, linen manufacturer—28, T. M. Fisher, Manchester and Bacup, Lancashire, cotton spinner—May 6, J. Cormie, Burslem, Staffordshire, manufacturer of earthenware—April 28, G. Mayer, J. Mawdesley, R. Lees, and J. Bridgwood, Burslem and Tunstall, earthenware manufacturers—C. Dunderdale, Manchester, merchant—29, J. Dobson, Liverpool, drysalter—May 4, R. Marsh, jun., St. Helen's, Lancashire, chemist—April 27, R. Smith, Bishop Wearmouth, Durham, merchant.

CERTIFICATES to be granted, unless cause be shown to the contrary, on or before April 27.

G. Cooke, Northampton, scrivener—G. Mann, Speen, Berkshire, paper manufacturer—J. Mallett, Wardour-street, Soho, printer—S. Whalley, Leeds, wool merchant—J. Ross, Leicester, wool stapler—S. Rogers, Newport, Monmouthshire, grocer—S. Clay, Huddersfield, merchant—G. Sanford, Great Dover-street, Southwark, merchant—J. Stringfield, Bath, ironmonger—C. Martyn, Newcastle-upon-Tyne, draper—S. Tennant, Manchester, cloth merchant.

Friday, April 9.

INSOLVENTS.

April 7.—John Tollitt, Liverpool, bookseller.
6.—Francis Sykes, Bridlington, Yorkshire, miller.

BANKRUPTS.

J. Whitfield, Bishopsgate-st. without, carpet warehouseman. [Sole, Aldermanbury.
T. Garlick, Greenwich, carpenter. [Baker and Bristow, Greenwich.
H. Samuel, Leadenhall-street, cigar manufacturer. [Berry, Trafalgar-square.
J. E. New and F. New, High-street, Aldgate, stationers. [Clark and Cooper, Sessions House, Old Bailey.
[Dowse, New Broad-street.
Frances Roberts and Caroline Rowe, New Bridge-street, Blackfriars, milliners.
S. Smith, Manchester, engraver. [Fox and Moss, Basinghall-street.
Mary Ann and Elizabeth Cross, Kingston-upon-Hull, spirit merchants. [Arnold and Born, Clement's-lane.
J. Morris, Birmingham, victualler. [Sheppard and Co., Cloak-lane.
T. Howell, Brighton, builder. [Faithfull, King's-road, Bedford-row.
E. Seddon, Skelmersdale, Lancashire, cotton spinner. [Makinson and Sanders, Elm-court, Middle Temple.
J. Ashcroft, Walsall, Staffordshire, grocer. [Dove, Carey street, Lincoln's Inn.
C. Lundy, Kingston-upon-Hull, straw hat manufacturer. [Field, Finsbury-circus.
G. Bradshaw, Welshpool, Montgomeryshire, draper. [Abbott and Arney, Charlotte-street, Bedford-square.

DIVIDENDS.

April 30, H. Lee, Down-street, Piccadilly, saddler—W. Strange, Abingdon, Berkshire, wine merchant—A. Curb and M. J. Wellard, Union street, Shadwell, sugar refiners—May 1, J. Holliday, Wapping, mastmaker—6, S. Stuart, Pall-mall, milliner—T. Ashton, Berners-street, Oxford street, bill broker—1, C. Hall, Piccadilly, upholsterer—4, C. Lacy, Church-street, Hackney, builder—4, A. G. W. Biddulph, J. Wright, H. Robinson, & E. W. Jerningham, Henrietta-st., Covent-garden, bankers—5, M. Reynolds and J. M. Knight, Rugby, Warwickshire, ironmongers—4, S. Bradbury, Dudley, Worcestershire, grocer—7, S. Hallney, Leeds, cloth merchant—4, J. A. Lee, E. Holt, T. Bell, and W. Brookton, Liverpool, iron founders—1, S. Howarth, Leeds, worsted spinner—7, J. Baker, Woodlands, Gloucestershire, scrivener—1, J. and H. Ridsdale, Leeds, stuff merchants—4, J. T. Milner and C. Bedford, Kingston-upon-Hull, confectioners—7, D. Keighley, Rawdon, Yorkshire, cloth manufacturer—1, G. S. Mallows, Holbeck, merchant—6, S. Brown, Chudleigh, Devonshire, draper.

CERTIFICATES to be granted, unless cause be shown to the contrary, on or before April 30.

J. T. Ratcliffe, Blackman-street, Southwark, stationer—T. Haines, Liverpool, butcher—S. Hill and T. Brown, Long acre, coach builders—W. Jackson, Louth, Lincolnshire, merchant—S. G. Wightman, Northampton, coal merchants—S. Partridge, Carlisle-place, Lambeth, victualler—J. Porter, Barnsley, Yorkshire, calenderer—E. Richardson, Sunderland, merchant—S. Jones, Liverpool, soap manufacturer.

IRON AND COAL TRADES—OFFICIAL ACCOUNTS.

Account of Iron sent down the Glamorganshire Canal, for the years 1829 to 1839, inclusive.

	1829.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	1839.	Total.
Guest and Co.	23352	27647	22675	[illegible]	33072	31477	39145	[illegible]	38014	38561	[illegible]	368219
W. Crawshay and Co.	24768	19892	15465	24068	37260	34052	[illegible]	34654	[illegible]	[illegible]	37009	354444
Plymouth Iron Company	13534	12177	10488	9790	12068	12673	12681	13573	15553	16143	15762	144187
Penydarran Iron Company	10865	11744	11819	10582	12150	12732	12854	12857	12484	12707	15549	135586
Aberdare Iron Company	8644	6765	6983	5097	6854	8407	9181	8961	9620	12247	11307	[illegible]
Blakemore and Co.	2001	2702	2947	3642	3519	3194	4070	3957	3394	3474	3384	33754
Brown, Lennox, and Co.	767	621	626	757	899	1163	1854	2457	2736	3894	4037	19612
Gadlys Iron Company	559	......	......	......	214	751	1028	1616	1756	1127	1081	9122
Bute Iron Works	163	......	......	36	572	434	127	114	22	......	......	1491
Taff Vale Iron Works	......	......	......	......	3461	3739	3968	4723	6171	5199	4246	[illegible]
Total .... Tons	85876	81546	70533	85677	112315	111012	119854	[illegible]	124610	136637	142781	1172035

Iron carried on the Glamorganshire Canal, from 1st January to 31st December, 1840.

Dowlais Iron Company .... tons.	45,718
William Crawshay	35,307
Penydarran Iron Company	16,180
R. and A. Hill	12,972
Aberdare Iron Company	10,327
Taff Vale Iron Company	4,992
R. Blakemore and Co.	3,175
Brown, Lennox, and Co.	2,476
Gadlys Iron Company	1,845
Total .... tons.	132,992

Coal carried on the Glamorganshire Canal, from 1st January to 31st December, 1840.

Thomas Powell and Co. .... tons.	61,130
Walter Coffin	50,913
George Insole	29,660
Lucy Thomas	25,988
Duncan and Co.	22,266
Aberdare Coal Company	16,140
Morgan Thomas	15,692
John Edmunds	13,321
David Davies and Co.	11,377
Evan Evans	2,374
Total	248,484

Coal carried on the Glamorganshire Canal, from 1829 to 1839, inclusive.

1829 .... tons	85,729
1830	108,170
1831	117,134
1832	165,351
1833	184,261
1834	168,953
1835	176,374
1836	192,241
1837	226,871
1838	189,991
1839	211,214

An Account of Iron sent down the Monmouthshire Canal, for the years 1829 to 1838, inclusive.

	1829.	1830.	1831.	1832.	1833.	1834.	1835.	1836.	1837.	1838.	Total.
Nantyglo Iron Company	17490	17350	17955	21338	21023	23064	24997	25497	28972	29141	217367
Ebbw Vale Iron Company	17082	19259	19077	16647	19904	20140	24391	22957	[illegible]	[illegible]	204719
Tredegar Iron Company	13279	12335	13330	13377	12313	12989	13917	13135	12061	15504	131930
Varteg Iron Company	9466	9436	11645	11176	11029	12453	14919	11296	10420	[illegible]	115645
Blaenavon Iron Company	9135	9461	9714	9066	8749	8391	9096	7369	7102	[illegible]	[illegible]
Clydach Iron Company	7430	7578	7088	6542	7304	6392	7652	7738	7987	9293	73964
Beaufort Iron Company	7102	6063	5186	6097	7572	[illegible]	12970	14467	11192	14017	92166
British Iron Company	7917	7762	[illegible]	7294	7823	[illegible]	9724	12179	10250	11037	91698
Bute Iron Company	9991	6225	7348	7179	5733	9064	4157	5879	6964	13797	75603
Hunt Brothers Company	4762	5418	4308	4199	4440	4981	6027	8297	6800	1647	51819
Blaina Iron Works	5187	6292	3934	6218	5052	6074	6861	9720	6500	7450	62091
Pontypool Iron Works	3996	2923	2967	3651	4307	4919	7667	4917	5067	9670	[illegible]
Garndyrris Iron Company	2262	3677	4133	1655	3049	2213	4130	4250	5065	3499	37561
Coalbrook Vale Company	2496	2621	2953	2918	2329	2962	2001	2749	2550	[illegible]	25091
Pontymoile Iron Company	1409	1354	1007	1351	1647	1123	1099	1640	1132	2357	13764
Victoria Iron Company	......	......	......	......	......	......	......	......	......	280	280
Rhymney Iron Company	346	228	54	......	......	160	......	......	......	......	812
Golynos Iron Company	......	......	......	......	......	......	......	......	1627	2567	3184
Union Foundry Company	84	142	149	139	......	......	......	......	......	......	575
John Brown, jun.	23	36	30	23	107	20	59	97	145	91	667
William Russell and Co.	......	579	647	715	910	690	726	574	574	108	1491
Pentwyn and Golynos Company	......	......	......	......	......	......	......	......	......	2001	2001
Phillip Woodruffe	......	......	......	274	1088	......	......	......	......	......	1362
Richard Walker	......	......	......	69	653	434	349	321	107	130	2063
Pentwyn Iron and Coal Company	......	......	......	......	......	......	......	......	......	2814	2814
Rhymney Iron Company	......	......	......	911	278	288	2092	165	3439	220	4962
John Yem	......	......	......	......	2001	......	......	......	......	......	2001
John Kennedy	......	......	......	......	......	130	146	1092	476	2602	1281
Total .... Tons	119469	113756	119409	124706	125465	136642	155066	151087	148115	167674	1359959

Iron sent to Newport in the year 1839.

J. and C. Bailey .... tons.	30,458
Harfords and Co.	25,389
Tredegar Iron Company	15,860
Rumney Iron Company	14,909
Blaenavon Iron Company	12,427
British Iron Company	12,482
Varteg Iron Company	12,839
Clydach Iron Company	9,446
C. H. Leigh	8,547
Blaina and Cwmcelyn Company	6,458
Coalbrook Vale Company	5,595
Pentwyn and Golynos Company	15,505
Pontymoile Iron Company	2,440
Kennedy and Hill	179
Monmouthshire Iron Company	1,080
Richard Walker	173
John Brown, jun.	80
Total .... tons.	175,321

Iron sent to Newport in the year 1840.

J. and C. Bailey .... tons.	36,711
Harfords and Co.	24,159
Rumney Iron Company	18,501
Pentwyn and Golynos Iron Company	17,743
Tredegar Iron Company	15,266
Blaenavon and Garndyris Company	14,161
Varteg Iron Company	12,879
British Iron Company	12,249
Clydach Iron Company	10,106
Capel Hanbury Leigh	9,404
Cwmcelyn and Blaina Company	8,867
Coalbrook Vale Iron Company	7,839
Monmouthshire Iron Company	6,436
R. Lewis	55
John Brown, jun.	9
Total .... tons.	194,469

LATEST PRICES OF FUNDS, SHARES, ETC.

ENGLISH FUNDS.

Consols Money, 89⅞ 90	New 3½ per Cents., 98⅞ ⅞
Ditto Account, 89⅞ 90	Exchequer Bills, 10 12 pm.

FOREIGN FUNDS.

Belgian Bonds, 5 per Cent., 101 3	Portuguese, 5 per Cent., 33¼ ¾
Brazil, 5 per Cent., 69 70	Ditto, 3 per Cent., 19¾ 20¼
Danish, 3 per Cent., 78 79	Spanish, Actives, 5 per Cent., 22⅛ ⅜
Dutch, 2½ per Cent., 51⅞ 2	Chili, 6 per Cent., 59 61
Ditto, 5 per Cent., 98 ¼	Colombian, 6 per Cent., 22½ ⅜
Russian, 5 per Cent., 112¾ 113½	Mexican, 5 per Cent., 30½ ⅞

SHARES.

London & Blackwall R'way, 5⅞ ¼ dis.	Great Western, 28 9 pm.
London and Brighton, 4⅞ ¼ dis.	Ditto ⅛ Shares, 13½ 14 pm.
London and Croydon, 13½ ⅜ per sh.	North Midland, 24 2 dis.
London and Birmingham, 65 7 pm.	South Eastern, 15 14½ dis.
London & Sh. Western, 56 7 per sh.	Colonial Bank, 8½ 24 pm.
Eastern Counties, 14 13½ dis.	London & Westminster, 2½ ⅞ pm.
London and Greenwich, 8 ¼ per sh.	London Joint-Stock, 2 ¼ pm.

MONEY MARKET AND CITY NEWS.

SATURDAY.—The business in the English funds, although rather limited, was sufficient to support the late advance, but not altogether with steadiness.

The foreign securities were pretty generally firm, but very few bargains were made in them.

In railway shares there is a further improvement, and their market closed buoyant.—Australasian Bank, 54; Commercial of London, 197; Union of Australia, 33½.—Canada Company, 39⅞.

MONDAY.—The news from the United States, received this morning, has in itself produced no great effect on the public securities; but the market has been weakened by a large sale by parties supposed to have American connections. As the same parties had previously been speculating for the rise, this change in their operations rather diminished the general confidence of the jobbers, who, in their turn, offered stock, so that the movement of the day was downward, although the high prices from Paris had in the first instance strengthened quotations.

Consols for Money opened 89¾, receded to 89⅜, rallied to 89⅞, and left off 89⅞ sellers; for the Account the opening price was 90 to ⅛, they then fell to 89⅞, rallied to 89¾, and closed 89⅞ buyers; New 3½ per Cents. were last quoted 98⅞; India Bonds, par to 2 pm.; and Exchequer Bills, 9s. to 11s. pm.

With the rather reduced values of the English stocks the foreign funds have sympathised, but no great deal of business was transacted. Spanish Actives were finally quoted 22⅛ to ⅜; Portuguese 5 per Cents., 33⅜ to 34; ditto 3 per Cents., 20 to ⅛; Dutch 2½ per Cents., 51⅞ to ⅞; ditto 5 per Cents., 97⅞ to 8⅛, ex div.; Danish, 77¾ to 78½, ex div.; Brazilian, 69 to 70, ex div.; Colombian, 22 to 3; and Mexican, 30 to 30½.

The railway share market is also declining, and sales of some descriptions were freely made. Birmingham shares left off 64 to 6 pm., ex the new shares; Brighton, 4⅞ to 3⅞ dis.; Blackwall, 5⅞ to ⅛ dis.; Great Western, 27½ to 28 prem., ex div.; North Midland, 24 to 22 dis.; ditto new, 3 to 2 dis.; Gosport, 4½ to 5½ pm., ex div.; South Eastern, 14½ to 14⅞; London and South Western, 56 to 5½; London and Greenwich, 8 to ¼ per share; ditto scrip, 4½ to ⅞; and Croydon trunk, 13½ to ¼.—Imperial Brazilian Mining Association, 6; British Iron Company, 47 dis.; United Mexican, new scrip, 4—Canada Company, 31—London and Westminster Bank, new, 7¼; Danube and Maine, 33½.

TUESDAY.—Considering that this was the first day of private transfer, very little business was transacted in the Government securities, the prices of which fluctuated but slightly. Consols for Money were first quoted 89⅞, went back to 89⅝, advanced to 89⅞, and closed 89⅞ to ¾, which was also the final price for the Account, it having previously ranged between 89⅞ and ¾. Money is in no demand, and is worth from 3 to 3½ per cent. for short periods.

The foreign securities were but triflingly dealt in, and the various quotations underwent little alteration.

Railway shares were not in great demand, but in the bargains made better prices than yesterday were obtained.—London and Westminster Bank, new, 7¼; National of Ireland, 10.

The business transacted in the foreign exchanges still continues but to a moderate extent. The rate on Amsterdam remained the same as last post, and those on Hamburgh and Paris were a shade higher.

The course of exchange at New York on London is 107½ per cent., and the par of exchange between England and America being 109 23-40 per cent., it follows that the exchange is 2·33 per cent. against England. But the quoted exchange at New York being for bills at sixty days' sight, the interest must be deducted from the above difference.

The premium on gold at Paris is 7½ per mille, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 25. 33, and the exchange at Paris on London at short being 25. 42½, it follows that gold is 0·38 per cent. dearer in London than in Paris.

By advices from Hamburgh the price of gold is 426½ per mark, which, at the English Mint price of 3l. 17s. 10½d. per ounce for standard gold, gives an exchange of 13. 6¾, and the exchange at Hamburgh on London at short being 13. 6½, it follows that gold is 0·11 per cent. dearer at Hamburgh than in London.

WEDNESDAY.—A great sensation was occasioned in the city to-day at the absence from their house of business of Mr. F. Wakefield and his son, who carry on business as bankers and stockbrokers, under the firm of "T. Wakefield and Co." The house is one of the oldest in the list of London bankers, although it has been lately but little known in that capacity. Their absence has given rise to several rumours, one of which is that their deficiencies amount to about 70,000l. Mr. Wakefield was the treasurer of the managers of the Stock Exchange, and the committee of managers sat to-day to inquire into the state of their affairs in connection with him, when an inspection of their cash box showed they had sustained no loss. It should be distinctly understood, that the committee of managers manage the property of the Stock Exchange, while the general committee manage the business. It is necessary to make this remark, because a rumour has gone abroad that the general committee sat on the affair, which is not the case, nor would it be a matter for their deliberation.

The English stocks have not been firm to-day, and it is thought a rather increased demand for money at yesterday's rates has principally acted upon the market.

The foreign stock market is also weaker, and prices have given way.

In railway shares very little business was done, and quotations are, in some instances, lower.

Upon the *President* insurances have been effected to-day at Lloyd's at the rate of 30 guineas per cent. premium.

THURSDAY.—It has much increased the painful feeling respecting Mr. Wakefield's defalcation to-day, that his list of deficiencies includes Exchequer Bills to the amount of [illegible], being part of the fund for the decayed members of the Stock Exchange, of which he was treasurer. Various rumours are in circulation respecting the amount of his general deficiencies, but nothing can be depended on as quite accurate. It would be useless, therefore, more particularly to refer to them.

The intelligence of the settlement with China, published this morning, had not so decided an effect on the funds as might have been anticipated, which is ascribed to the general belief that this would be the case, and to a few sales for realisation, which had been previously fixed at the limit of 90, and which have prevented the market from going beyond that quotation. If, however, the market did not advance, it was fully sustained to the close of business.

Consols for Money and the Account, after having been 90, with a price for the Account at one time as high as 90⅛, closed 89⅞ to 90; 3 per Cents. Reduced, 89; 3½ per Cents. Reduced, 97¾; New 3½ per Cents., 98⅞.

The foreign stocks were very inactive, and prices but slightly fluctuated.

The railway share market was firm, and Great Westerns advanced 1l. per share.—British Iron Company, 47 to 4 dis.—London and Westminster Bank, new, 7¼.—Australian Agricultural Company, 49.

Owing to the short interval that has elapsed since the last day for the negotiation of bills, there was a reduced supply of paper offering upon foreign places generally. The rates on Amsterdam and Paris remained the same as last post, and Hamburgh was rather lower.

FRIDAY.—This day being observed as a close holiday in the City, there was no business transacted in the public funds.

THE REVENUE.—The revenue accounts for the years and quarters ended 5th of April, 1840 and 1841, were published on Monday last. The income for the year ended 5th April, 1840, is 44,887,166l.; for the year ended 5th April, 1841, 44,673,806l. The decrease on the year is 209,360l. The income for the quarter ended 5th April, 1840, 9,679,714l.; for the quarter ended 5th April, 1841, 9,609,100l. The decrease on the quarter is 70,614l. On the year ended 5th of April, 1841, as compared with the previous year, there is a decrease in the Customs of 101,942l., and in the Post-office of 893,000l. There is in the Excise an increase of 180,700l., in the Stamps also of 101,716l., and in the Taxes of 273,910l. On the quarter there is a decrease in the Customs of 34,118l., in the Excise of 44,138l., in the Post-office of 27,000l., while in the Stamps there is an increase of 19,216l., and in the Taxes of 41,661l. There would have been an increase in the revenue of the year of upwards of 550,000l., but for the diminution in the revenue of the Post-office.

LATEST PRICES OF IRISH STOCKS.—3 per Cent. Consols, 90¼—3½ Stock, 97¼—Ditto New, [illegible], 98¼—3½ per Cent. Debentures, [illegible]—Bank Stock, 196—Kingstown Railway, 11—Drogheda, 7¼—National Insurance Company, 20—City of Dublin Steam Company, 113—ditto Stock, 1605, 57¾—British and Irish Steam Company, [illegible]—Hibernian Bank, 39¼—Royal Bank, 19—Mining Company of Ireland, 13¼—Wicklow Copper Mine, 9.

PARIS, April 6.—5 per Cents., 115f. 40c.; 4 per Cents., 99f. 50c.; 3 per Cents., 79f. 40c.; Bank Actions, 3130f.; Laffitte Bank, 5152f.; Belgian Bank, 797f. 50c.; Belgian 5 per Cents. 101; New Loan, 101¼; Spanish Active, 24; Portuguese 5 per Cents., 30¼; Neapolitan, 104; Roman, 173½—90; Germain Railway, 725f.; Versailles, R. B., [illegible]; ditto L. B., [illegible]; Orleans, [illegible]; Strasburgh to Bâle, [illegible]; Montpellier to Cette, [illegible]; Rouen, [illegible]; Mulhausen to Thann, [illegible].

LEEDS, Thursday.—Our prospects of an improvement in shares, generally speaking, are brighter than they were last week, the news from America continuing still of a pacific tendency, and we have not the least doubt that the political clouds which have so long hung over the money market will speedily disappear. There is one circumstance in prospect that must not be forgotten, and that is, the financial statement of the Chancellor, at the end of the month, when we hope to see the idea of increased duties on produce, and bringing in its train an increase of revenue, fully demonstrated to the country. The market here for North Midlands is again very firm at 77½, whilst five weeks ago they were as low as 69l.; Manchester and Leeds shares are [illegible] at [illegible] dis., and we fear that these shares have anything but an upward aspect, the traffic of this line not yet answering the expectations of its promoters. The bill, sanctioning the lease of the Leeds and Selby to the York and North Midland would receive the Royal assent on Tuesday last, so that we now consider those shares (Leeds and Selby) as being completely beyond the reach of any accident, having 3l. per share secured to them for about thirty years, besides a fund arising from the stock in hand already on hand, of about 7s. per share, and a certainty of a dividend of 5l. 10s. on 1st July next. We cannot see any thing more tempting to capitalists than to buy this stock at the present prices, but we suppose, when they have advanced 3l. per share, people will be more anxious to get hold of them. Hull and Selbys remain precisely the same as they were last week, and so do York and North Midlands; Sheffield and Rotherham remain quiet at 7l. pm. for old, and 3l. pm. for new.—North Midland Railway, 77½.—York and North Midland, [illegible]; Leeds and Selby, [illegible] to [illegible]; Hull and Selby, [illegible].—Great North of England [illegible]; Manchester and Leeds, [illegible]; Sheffield and Rotherham, 32l.—Leeds Banking Company, 19½l.; Leeds and West Riding, 9½l.; Leeds Commercial, 4l.; Yorkshire District, 9½l.; Yorkshire Agricultural and Commercial, 4l.; York City and County, 36l.; York Union, 17½l.—Leeds and Liverpool Canal, 760l.; Barnsley, 280l.; Huddersfield, 28l.; Rochdale, 86l.—Leeds and Yorkshire Assurance Company, 10½l.—Leeds Old Gas Company, 19½l.; Leeds New Gas Company, 36l.—Leeds Commercial Buildings, 23l. R. B. WATSON & Co.

HULL, Thursday.—Although the actual transactions of the past week have been trifling in amount, more firmness has, upon the whole, been evinced. Railway stock is in rather better demand. Yorkshire District Banks meet more inquiry. In miscellaneous stocks there have been few (if any) bargains; our quotations are, therefore, nominal.—Birmingham and Derby Railway, 70l.; Birmingham and Gloucester, 80l.; Edinburgh and Glasgow, 34½l.; Grand Junction, 211l.; Great North of England, 65½l.; Great Western, 93l.; Hull and Selby, 44l.; Leeds and Selby, 9½l.; Liverpool and Manchester, 198l.; London and Birmingham, 157l.; Manchester and Leeds, 6xl.; Midland Counties, 80l.; North Midland, 77l.; Sheffield and Rotherham, 32l.; York and North Midland, 79l.—York City and County Bank, 36l.; Yorkshire District, 7½l.; Hull, 7½l.; Yorkshire Agricultural, 4½l.; Sunderland Joint-Stock, 4½l.—Hull Dock Company, 1200l.—Hull Shipping Company, 10l.—Hull Flax and Cotton Mills, 107l. COLLINSON & FLINT.

GLASGOW, Wednesday.—Ballochney Railway, 80l.; Dundee and Arbroath, 28l.; Edinburgh and Glasgow, 34½l.; Garnkirk and Glasgow, 30l.; Glasgow and Greenock, 23½l.; Glasgow, Paisley, Kilmarnock, and Ayr, 3xl.; Monkland and Kirkintilloch, 58l.; Paisley and Renfrew, 4l.; Slamannan, 42l.; Wishaw and Coltness, 80l. JAMES WATSON.

BRISTOL, Thursday.—Our market closed languid to-day, and more sellers than buyers at my quotations.—Great Western Railway, 92l. to 93l.; ditto halves, 63l. to 63½l.; ditto fifths, 11l. to 11½l.; Bristol and Exeter, 35l. to 36l.; Cheltenham Union, 29l. to 30l.; Birmingham and Gloucester, 78l. to 80l.—Bristol Gas Company, 32l.; Clifton Gas, 28l. LUKE ARNOLD.

LIVERPOOL, Thursday.—We have had very good business during the week, but the market rather gave way in the course of the day. The news from China arriving at the close of the day caused more firmness, and we may expect a very considerable advance on Saturday.—Chester and Birkenhead Railway, 17⅞l.; Eastern Counties, 9l.; Edinburgh and Glasgow, 34½l.; Glasgow, Paisley, and Greenock, 24½l.; Grand Junction, 211l.; quarter-shares, 28¼l.; Great Western, 93l., half-shares, 64l.; fifth shares, 11½l.; Liverpool and Manchester, quarter-shares, 46⅞l.; London and Birmingham, 156l.; quarter shares, 23½l.; new thirds, 24½l.; London and Brighton, 45⅞l.; Manchester, Bolton, and Bury, 54l.; Midland Counties, 80½l.; new shares, 22½l.; North Midland, 78l.; North Union, 81l.; Paris and Rouen, 5l.; South Eastern and Dover, 18½l. RICHARD DAWSON.

EXPORTATION OF GOLD AND SILVER.—By the official return published by the Customs, the export of the precious metals from the port of London to foreign and colonial ports, for the week ending Thursday, the 1st inst., was as under:—

Silver coin to Hamburgh	241,000	ounces.
" Rotterdam	4,000	"
Silver bars to Hamburgh	72,250	"

[Attention has been called to the very considerable exports of silver coin and bars since the commencement of the present year, and which, in fact, is considerably out of proportion as compared with the shipments of gold; the quantity of the former metal sent away up to the present time cannot be far short of 2,500,000 oz., which may be roundly estimated in currency value at 450,000l.—this, perhaps, after all, is not a great deal, but it so happens that about half of it has left us within the last three weeks. Silver, we know, is very abundant here just now, and may have been employed as a more profitable remittance than bills, but we hope this is no indication of the amount to be sent away when the navigation in the north of Europe is actively resumed. The total exports of gold have not been above 700 oz., or about 2400l.]

OVERLAND MAIL FROM INDIA.

We quote the following particulars from the papers and letters received by the overland mail on Thursday and Friday:—

CALCUTTA MARKETS.

Metals.—A good deal of business has been done in spelter since our last, and prices have risen to ct. rs. 11 to 11-1 per fy. md. Iron has been in very good demand since our last, and many large sales have taken place, but no great improvement in price has been manifested; and in lead there has been a little business done in stamped pig, at sa. rs. 6-14, during the past month; for other descriptions the market is very dull.

Bank of Bengal.—Shares have experienced the decline usual after the payment of dividends, and have returned to the quotations ruling before the half-yearly meeting took place—viz., 2350 to 2400 pm.

Union Bank.—In our last we mentioned that the dividend would be probably 8 per cent. It was, however, ultimately agreed to divide 9 per cent., which caused inquiry for shares at advanced prices. Shares upon which dividends have been received may now be quoted at 1275 to 1280.

BOMBAY MARKETS.

Money Market.—Money has been excessively scarce in the Bazaar, but the recent large sales of cotton and opium will tend to relieve many of the dealers.

Government Securities.—No recent transaction of magnitude is reported to us.

Bills on Bengal.—A few have been negotiated at sight at ½ per cent. dis., and sixty days' bills at 2 dis.

Bank of Bombay.—Shares are nominally at 30 pm.

Bank of Asia.—The shares allotted to Bombay have been apportioned, and a request is to be transmitted home for a further quantity. The applications are said to have amounted to 4000 shares, many of the parties being induced to apply, it is supposed, under the impression that they will soon be saleable at a premium.

SALE OF COPPER ORES AT REDRUTH.

Sampled March 24, and sold at Andrew's Hotel, Redruth, April 8.

Mines.	Tons.	Price.	Purchasers.	Mines.	Tons.	Price.	Purchasers.
Fowey C.	106	6 12 0	Freemans.	Unity W.	68	6 5 6	Vivians.
ditto	49½	5 12 0	Vivians.	ditto	32	5 16 6	Williams.
ditto	49½	5 12 0	Nevill & Co.	ditto	8	4 11 0	Mines Royal
ditto	96	7 2 6	Freemans.	ditto	8	4 11 0	Freemans.
ditto	81	5 14 0	——	Union	25	5 16 0	Williams.
ditto	75	6 4 6	——	W. Provid.	65	4 14 0	——
Friendship	85	5 10 6	Nevill & Co.	ditto	40	10 8 0	——
ditto	82	7 0 0	Williams.	ditto	6	3 13 0	Freemans.
ditto	48	8 13 0	Nevill & Co.	Treleigh C.	75	4 15 6	P. Grenfells.
ditto	39	5 18 0	——	ditto	17½	2 18 0	——
W. Prosper	41½	8 12 0	——	ditto	17½	2 15 0	Freemans.
ditto	41½	8 12 0	Williams.	Provid. M.	95	5 16 0	Vivians.
ditto	63	5 5 0	Nevill & Co.	Wh. Speed	63	3 12 6	——
Penberth. C.	22	5 5 0	——	ditto	26	5 14 6	Williams.
W. Virgin	123	6 1 6	Vivians.	Bazeley ore	80	2 10 0	Nevill & Co.
ditto	73	9 9 0	Freemans.	Marazion	39	9 0 6	Freemans.
ditto	67	5 14 0	P. Grenfells.	ditto	20	2 10 6	Nevill & Co.
ditto	20	5 5 6	Williams.	ditto	17	19 18 6	Freemans.
Trewavas	75	5 14 6	P. Grenfells.	W. Messer	66	6 11 0	Williams.
ditto	64	10 4 6	Vivians.	Wh. Mary	25	8 0 6	P. Grenfells.
ditto	30	5 17 0	P. Grenfells.	ditto	9	1 16 6	Freemans.
ditto	30	5 17 0	Williams.	Trevorian	11½	6 13 0	——
Levant	70	8 12 0	Vivians.	ditto	11½	6 13 0	P. Grenfells.
ditto	48	9 8 0	Williams.	Wh. Plenty	10	4 17 0	Vivians.
ditto	47	7 11 6	Vivians.				

TOTAL PRODUCE.

	Tons.	Amount.		Tons.	Amount.
Fowey Consols	481	£3091 9 6	Treleigh Consols	109	£444 16 6
Wh. Friendship, Wh. Prosper, Penberthy Crofts	416	2628 3 0	Providence Mines	95	551 0 0
Wh. Virgin	298	1941 3 0	Wh. Speed	89	377 4 6
Wh. Trewavas	199	1434 13 6	Bazeley's ore	80	200 0 0
Levant	165	1409 4 6	Marazion Mines	76	735 9 0
Wh. Unity Wood, Union	141	988 18 0	Wh. Messer	66	432 0 0
Wh. Providence	111	743 0 0	Wh. Mary	34	217 1 0
			Trevorian	23	153 19 0
			Wh. Plenty	10	48 10 0

Average standard, 122l. 6s.—Average produce, 7¼.—Average price, 6l. 6s. 6d.—Quantity of ore, 2360 tons.—Quantity of fine copper, 177 tons 14 cwt.—Amount of money, 15,240l. 11s. 6d.—Average standard of last sale, 124l. 4s.—Average Produce, 7.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	8	£36 8 0
Vivian and Sons	551½	4039 11 6
Freeman and Co.	543	3017 17 0
Grenfell and Sons	299	1660 11 6
Sims, Willyams, Neville, Druce, and Co.	430	2277 7 0
Williams, Foster, and Co.	498½	3303 10 6
Total	2360	£15,240 5 6

NO SALE on Thursday next.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Trevenson, 177; Trethellan, 153; Fowey Consols, 300; Par Consols, 220; Wheal Lydia and South Towan, 113; Holmbush, 208; North Downs, 125; Levant, 113; Great Wheal Charlotte, 113; Wheal Gorland, 52; Wheal Kitty, 40; Polbreen, 16.—Total, 2350 tons.

SALE OF COPPER ORES AT SWANSEA.

Sampled March 16, and sold at Swansea on the 7th of April.

Mines.	Tons.	Produce.	Stand.	Price.	Mines.	Tons.	Produce.	Stand.	Price.
Cobre	90	22¾	93¼	19 0 0	Knockmahon	74	11½	113	10 15 0
ditto	67	20¾	94¾	19 10 0	ditto	67	10	118¼	11 7 0
ditto	63	20¾	93¾	19 11 0	ditto	33	11½	112¾	10 10 0
ditto	60	23¾	93¾	19 11 0	ditto	37	7½	119¼	6 11 0
ditto	64	23½	93	19 10 0	Chili	108	26¾	90¾	22 11 0
ditto	40	20⅞	91⅞	20 0 0	ditto	90	27½	90⅞	22 12 0
ditto	91	14¾	97	12 3 0	ditto	63	21	90¼	17 7 0
ditto	80	23¾	93¼	19 8 0	ditto	39	50	90	40 3 0
ditto	80	14¾	90¾	11 13 0	ditto	64	20¾	93	16 17 0
ditto	70	14¾	90	12 1 0	Chili	90	49¾	90⅞	41 10 0
ditto	60	15	90	12 3 0	ditto	56	25	94	21 3 0
ditto	70	14⅞	97¼	11 17 0	Cuba	60	21¼	97⅞	17 17 0
ditto	80	14¾	99⅞	12 2 0	ditto	37	21⅞	93⅞	17 17 0
ditto	80	14¾	90¾	12 2 0	ditto	16	23¼	90	17 10 0
Knockmahon	132	8½	130¾	7 10 0	Tigrony	22	3⅞	123¼	4 17 0
ditto	67	7½	129	6 16 0	ditto	16	3¾	143	2 3 0
ditto	93	8¾	120¾	7 16 0	Crookhaven	16	3¾	143	3 5 0

TOTAL PRODUCE.

	Tons.	Amount.		Tons.	Amount.
Cobre	981	£14070 3 0	Cuba	330	£2679 11 0
Knockmahon	305	£4864 1 0	Tigrony	38	143 3 0
Chili	363	8085 14 0	Crookhaven	16	22 15 0
Chili	145	4019 2 0			

Total tons, 2167.—Total amount, £35,108 11s. 6d.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	153	£2935 16 0
Freeman and Co.	154½	1477 6 3
Grenfell and Sons	44	330 0 0
Sims, Willyams, Neville, Druce, and Co.	360	5173 3 0
Vivian and Sons	410½	8500 17 0
Williams, Foster, and Co.	809½	14109 11 9
Mines Royal	185	2481 17 6
Total	2147	£35,108 11 6

Copper ores for sale April 21.—Cobre 90, ditto 80, ditto 76, ditto 71, ditto 70, ditto 37, ditto 90, ditto 80, ditto 70, ditto 60, ditto 50, ditto 38, ditto 90, ditto 78, ditto 70, ditto 60, ditto 53, ditto 32, ditto 100, ditto 80, ditto 70, ditto 60, ditto 41, ditto 90, ditto 70, ditto 67, ditto 60, ditto 100, ditto 80, ditto 45, ditto 4—Chili 90, ditto 90, ditto 110, ditto 26, ditto 80—Santiago 90, ditto 89, ditto 87, ditto 86—Allihies 115, ditto 94—Chili 11, ditto 40, ditto 18, ditto 10, ditto 6, ditto 6, ditto 5, ditto 4, ditto 4, ditto 4, ditto 4, ditto 3, ditto 3, ditto 3, ditto 43, ditto 25—Lackamore 62, ditto 20—Llwyndu 40—Sygun 18, ditto 14.—Total, 3379.

COPPER ORES SOLD BY PRIVATE CONTRACT, March 15.

Mines.	Tons.	Price.	Purchasers.
South Caradon	124	£6 15 0	Williams and Co.
ditto	122	6 16 6	Williams and Co.
ditto	40	6 16 6	Williams and Co.

Particulars of copper ores sold in Cornwall, in the quarter ending March 31.—Copper ore, 32,845 (21 cwts.)—Fine copper, 2370 tons 19 cwts.—Amount of money, 207,662l. 5s. 6d.—Average standard, 123l. 11s.—Average produce, 7¼—Average price (21 cwts.) 6l. 5s. 6d.

PRICES OF MATERIALS IN CORNWALL

AS SUPPLIED AT THE PRINCIPAL MINES IN THE FOLLOWING MONTHS.

	11&12	1 & 2		11&12	1 & 2
Common iron, per cwt.	8s 6d	8s 6d	Iron-wire sieves, each	2s 8d	2s 4d
Half-inch square ditto	11 0	11 0	Iron-wire work, per foot	6	6
Best tough whim chain	30 0	28 0	Board nails, per cwt.	17 6	17 6
Boiler plates	13 6	13 6	Half-board ditto, per 1000	5 0	5 0
Hoop iron	12 0	12 0	Hatch ditto	2 8	3 8
Nail rods	12 6	12 6	Half-hatch ditto	3 0	3 0
Miners' shovels	32 0	32 0	Linseed oil, per gallon	2 6	2 6
Charcoal iron	13 6	13 6	Rape ditto	3 3	3 3
Gunpowder, per 100 lbs.	40 0	40 0	Birch, per foot	1 7	1 8
Leather, per lb.	1 10	1 10	Pine	1 6	1 6
Coals, per ton, at quay	12 0	10 6	Sheet lead, per cwt.	21 0	21 0
Candles, per dozen lbs.	5 9	5 6	Barrow bends	11 6	11 6
Tallow, per cwt.	52 0	52 0	H 2 steel (112 lbs.)	30 0	30 0
Ropes	36 0	36 0	2s. nails	16 10	16 10
Flat ropes	50 0	48 0	Pick hilts	1 6	1 6
Hemp	0 4½	0 4½	Shovel hilts	2 0	2 0
White yarn, per cwt.	37 0	37 0	White ground lead	23 6	23 6
White rope	34 0	33 0	Red lead	25 0	26 0
Brass-wire sieves, each	3 9	3 6	Best rolled iron	11 6	11 6
Ditto machine	13 0	13 0	Blistered steel	40 0	40 0

. The figures at the top of the columns refer to months—as 1 Jan., 2 Feb., &c.

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 9, 1841.

	£ s. d.		£ s. d.
Iron, Eng.—Bar ton 0 0 0 to	8 0 0	Copper—Foreign.... (dy. 37s.)	——
Do. Carg. in Wales	7 0 0	Tin, Brit.—Blocks ..... cwt	4 2 0
Hoops ..... ton	10 10 0	Bars ..... do.	4 4 0
Sheets, ... ton	11 10 0	Banca ..... 0 0 0 to	3 15 0
Pig, No. 1 ..... ton	5 0 0	Straits ..... 0 0 0 to	3 13 0
Do. in Wales	4 5 0	Tin Plates—I.C. (box).. 1 11 0 to	1 14 0
Foreign— Swedes, cn. bd. ton	14 5 0	I.X. do. .. 1 17 0 to	2 0 0
Duty 30s. per ton. Russian com... ton	14 10 0	(Others in proportion.)	
P.S.I. ..... ton	15 15 0	Lead, Brit.—Pig ..... ton	20 10 0
C.C.N.D. ..... ton	18 10 0	Sheet ..... ton	21 10 0
Steel, Eng. Blistered, 25 0 0 to	45 0 0	Shot ..... ton	22 10 0
Shear do. do. 45 0 0 ..	84 0 0	Red ..... ton	21 10 0
Cast do. do. 45 0 0 ..	84 0 0	White (dry).. ton	26 10 0
Foreign— Swedes in kgs bd. ton	20 0 0	Do. (gd. in oil) ton	24l a 28l
Duty 20 per cent. Do. Faggots bd. ton	21 0 0	Foreign—Span. (dy. 40s.) ..	19 15 0
Milan.... bd. ton	0 0 0	Spelter ..... 0 0 0 to	26 10 0
Copper, Brit.—Cake ..... ton	100 0 0	For delivery 0 0 0 to	25 10 0
Tile ..... do.	98 0 0	English Sheets	39l a 41l
Sheets.... lb.	1 1½d to 1s	Quicksilver—(dy. 1d. per lb.)	0 3 11

COAL MARKET, LONDON.

MONDAY.—Price of coals per ton at the close of the market:—Adair's Main 16—Bell Robson's Hartley 16—Buddle's West Hartley 17—Hebburn Main 18—Holywell 18—New Tanfield Moor 17 6—Pontop Windsor 17—Wylam 16 9—Wall's End Clennell 15 9—Hilda 18 9—Perkins 18—Braddyll's Hetton 21 9—Hedley 19—Russell's Hetton 21 9—Clarence 16 6—Gordon 17 6—South Durham 19—Tees Hetton 17—Wellington 17 9—Howard's Netherton Main 16—Woshro Park .—Ships arrived, 77.

WEDNESDAY.—Bell Robson's Hartley 16—Carr's Hartley 17 6—Pontop Windsor 17—Smith's Pontop 15 6—Townley 16—West Wylam 16—Wall's End Clarence Hetton 16—Clennell 15 9—Heaton 19—Hilda 18 6—Killingworth 18—Riddell's 18 9—Braddyll's Hetton 21 9—Grange 19 6—Hetton 22—Whitwell 20—Hartlepool 21 9—West Kelloe 21—Adelaide 21—Tees 21—Evenwood 16 6—Seymour Tees 19—Cowpen 16 6—Fordel Splint 14 6—Hartley 17—Howard's Netherton Main 16—Elgin 17.—Ships arrived, 101.

FRIDAY.—To-day being Good Friday there was no market.

PRICES OF MINING SHARES.

Shares.	BRITISH MINES.	Paid.	Price
500	Anglesey	5	8
4,000	Bissoe Bridge	5	1
8,000	Blaenavon	45	40
10,000	British Iron	60	47 dis
100	Copper Bottom	41	30
2,000	Cornubian Lead Co.	3¼	1
6,000	Cornwall Great United	10½	1
1,000	Cuddra	10	1
5,500	Dartmoor Consols	5	1
10,000	DurhamCountyCoalCo.	37	—
2,000	Danescombe	—	2½
2,000	De Dunstanville	—	—
1,000	Duffield	30	11
1,200	East Mulberry Hills	3¼	1
3,200	Great Wh. Prosper	7½	6¼
4,000	Great Wh. Charlotte	3	1
10,000	Hibernian	12½	3
1,000	Holmbush	14	40
2,000	Isle of Sark (Guernsey)	10½	23
20,000	Mining Co. of Ireland	7	13¼
6,000	Polbreen	4	1
2,000	Relistian	—	1½
5,000	Redmoor Consolidated	5	1
10,000	Rhymney Iron	50	25
800	South Towan	10	1
4,000	Tregollan	4	¼
4,000	Treleigh Consols	4¼	1¼
4,303	Tamar Consols	3	2
6,000	Tin Croft	6¼	4½
124	Trevaskus	60	30
4,500	Tretoil	1¼	3
4,000	United Hills	5	9
6,000	Wicklow Copper	5	8
3,840	West Wheal Jewel	8	4¾
1,000	Wheal Julia	—	3¼
3,300	Wheal Leeds	¼	—

FOREIGN MINES.

Shares.	FOREIGN MINES.	Paid.	Price
5,000	Alten Mining Company	12½	11
10,000	Anglo Mexican Co.	100	1¼
3,374	Do. Subscription	25	1
2,000	Bolanos	150	27½
	Ditto Scrip	15	17½
10,000	Brazilian Imperial	20	6
10,000	Bolivar	20	¼
10,000	Ditto Scrip	10	2
10,000	Cata Branca } Brazilian Co.	6¼	7
10,000	Conceiçao }	4	—
12,000	Cobre CopperCompany	40	31¼
8,500	Colombian Co. regis.	55	2
10,000	Copiapo Mining Co.	13½	9¼
20,000	General Mining Asso.	18	3
3,351	Mexican Company	18	2¼
12,000	Mocambas and Cocaes	25	6
14,382	Real del Monte, regis.	63¼	2¼
	Do. unregistered	—	1¼
	Ditto Loan Notes	150	100
7,000	Royal Santiago	10	15
11,000	St. John d'el Rey	14¼	2¼
10,000	United Mexican	40	2¼
	Black Scrip, addl capital	5	3
	Red New Scrip	5	4

RAILWAY SHARE LIST AND TRAFFIC RETURNS.

Line.	Entire Lgth.	Now Open.	Present actual cost.	Pd. on Share.	Val. of Share.	Last week's Returns.
Birmingham & Derby Junc.	48	38½	£ 853,044	100	69	1043 9 1
Birmingham and Gloucester	32½	5¼	1,018,723	100	79	1050 9 1
Dundee and Arbroath	16¾	16¾	134,894	25	27	209 10 9½
Eastern Counties*	126½	17¼	1,476,170	23	9¾	641 16 8
Glasgow and Ayr	51	40	699,341	40	39	786 8 3
Glasgow and Paisley Joint	6¾	6¾	250,000	25	23¼	258 17 3
Grand Junction	97½	97½	1,350,000	100	204	7285 5 8
Great North of England	75	45	1,000,000	90	65	884 19 9
Great Western	117	92	5,288,044	65	93¼	5682 16 6
Hull and Selby	31	31	480,000	50	45½	696 5 3
Lancaster & Preston Junc.	20¾	20¾	350,000	42¼	31¼	377 10 7
Liverpool and Manchester	31	31	1,410,000	100	100	4984 9 9
London and Birmingham	112½	112½	6,724,967	90	156	14295 7 4
London and Blackwall	3¾	3¾	967,000	25	19¾	379 6 6
London and Brighton	46¾	3¾	1,491,389	50	45⅞	199 9 1
London and Croydon	10¾	10¾	547,002	18¾	13¾	333 16 8
London and Greenwich	3¾	3¾	798,000	20	7¾	980 16 6
London and South Western	80	76¾	2,293,697	39¾	56¾	4492 19 10
Manchester, Bolton, & Bury	10	10	779,330	95	55	487 10 0
Manchester & Birmingham	40	3	1,106,017	40	23½	317 14 3
Manchester and Leeds	50	50	3,325,000	70	67	2893 19 10
Maryport and Carlisle	28	7	340,000	50	47	...
Midland Counties	57	57	1,486,000	100	80	2136 7 10
Newcastle and Carlisle	60½	60¼	730,000	100	107	...
Northern and Eastern†	19¾	19¾	358,912	50	37	545 3 5
North Midland	72½	72½	2,929,007	100	77	2669 11 7
North Union‡	23	23	800,000	75	80	...
Preston and Wyre	19½	19¾	274,000	50	50	231 16 7
Sh. Belt and Rotherham	5¾	5¾	180,317	25	31	...
Ulster	25	8	220,143	22½	—	178 14 3
York and North Midland	35	30	445,000	50	80¼	1137 6 6

* Including Northern and Eastern Railway toll. † Rent and toll to Eastern Counties (about 136l. per week) included in the returns. ‡ The Liverpool and Manchester toll is deducted.

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